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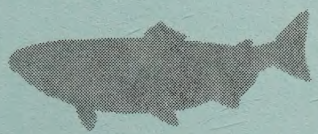
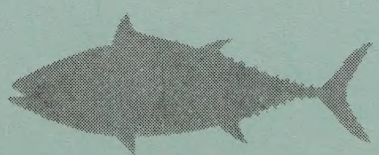


HARBOR SEAL, *Phoca vitulina richardsi*, CENSUS IN CALIFORNIA, JUNE 2 - 5, 30, AND JULY 1, 1986

Doyle A. Hanan, John P. Scholl, and Sandra L. Diamond



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INTRODUCTION AND METHODS

California Department of Fish and Game (DFG) initiated a harbor seal, Phoca vitulina richardsi, census along the mainland California coast in 1981 as part of a cooperative marine mammal assessment program with National Marine Fisheries Service (NMFS). The data gathered from the censuses are to be used for development of an annual index of abundance, to be used for detecting trends in population abundance and distribution. The first census was incomplete but allowed refinement of techniques, which have been employed in the subsequent censuses. Those techniques and the results of the 1982, 1983, 1984, and 1985 censuses are reported in previous annual reports (Miller et al. 1983, Hanan et al. 1985, Hanan et al. 1986a, Hanan et al. 1986b).

This report presents results of the 1986 census, which employed previous survey techniques as closely as field conditions permitted. The survey was flown at 600 feet altitude in a Cessna 185. The airplane is equipped with an optical glass photography port in the belly of the airplane for vertical pictures which have less counting bias than oblique pictures. The sites were photographed sequentially from south to north taking advantage of the northward progression by time and location of the low tide. Some sites were photographed on consecutive days to assure adequate photographic coverage. The survey team consisted of a pilot, recorder, and photographer using a Hasselblad model 500-ELM camera with a 100 mm f3.5 lens and motordrive. Kodak 64 or 200 ASA Ektachrome film was used depending on lighting conditions determined by a Soligor II spotmeter[1]. A Nikon 35 mm camera with motordrive and a 100 mm lens were taken as a backup camera system in case of Hasselblad malfunctions.

Counts of harbor seals were made by viewing rolls of developed film through dissecting microscopes. Each seal was counted by marking a thin plastic sheet placed on the photograph. Seals not easily identified as pups were counted as adults. Counts were recorded by hauling site number and transferred later to a computer database.

Besides the aerial surveys, twenty-one known hauling sites were surveyed by observers from vantage points on the shore (ground counts). These observers counted seals each half hour or, if numbers were large, as frequently as conditions permitted. They counted, using binoculars or spotting scopes, from one hour before low tide to an hour and a half after low tide. For each day censused, the maximum count at each site was entered into the

database. If the ground count exceeded the aerial count for a site, the ground count was used for the mainland total (Appendix I).

The harbor seal census database includes both aerial and ground count information stored in a separate file for each census (Appendix II). The files were created using the database management program dBASE II[2]. The files are maintained as individual records for each hauling site along the California coast. The records contain descriptive information about each site as well as the seal counts (Appendix III).

RESULTS

The mainland coast of California was surveyed on June 2-6, 1986. Harbor seals occupied 325 of 648 hauling sites, including 69 new sites (not previously identified or occupied). As in the previous censuses, counties north of San Francisco Bay had the largest numbers of seals and accounted for 57% of the mainland harbor seal total (Table 1).

The southern California islands were surveyed on June 30 and July 1 using the same techniques as for the mainland. The total count for all eight islands was 1,801 seals, which was lower than the counts for the previous 4 years (Table 2), but this count was later in the year than the previous counts; thus, we may have missed the peak hauling period on the islands.

Combining the island and mainland counts (1,801 and 13,913 seals) and assuming little movement between counting areas during the census yields a 1986 count of 15,714 harbor seals in California (Table 3).

[1] Use of brand names does not imply endorsement by DFG or NMFS.
[2] A trademark of Ashton-Tate, 10150 West Jefferson Boulevard, Culver City, California 90230.

ACKNOWLEDGEMENTS

We thank the two DFG warden-pilots, Larry Heitz and Richard Anthes, who flew this survey for us. We also thank the people who donated their time to do the ground counts: V. Torres, P. Yochem, M. Klope, C. Kuizenga, C. Woodhouse, D. Seagars, J. Sterner, C. Pergler, E. Traveres, R. Hardy, L. Laurent, J. Bodkin, R. Jameson, L. Maul, A. Rubin, J. Spratt, A. Baldrige, J. Leupel, D. Moehle, G. Kwiechien, T. Weist, J. Hardwick, J. Ames, D. Miller, S. Allen, K. Karpov, P. Pyle, C. Depkin, H. Huber, and S. Johnston. Finally we express appreciation to Doug DeMaster, Jim Lecky, and Chuck Oliver for their help in these studies.

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TABLE 1. Harbor seal counts with the number of sites and occupied sites by county for the May 28-31, 1985 census (DN= Del Norte, H= Humbolt, MEN= Mendecino, SON= Sonoma, MAR= Marin, CC= Contra Costa, SF= San Francisco, ALA= Alameda, SM= San Mateo, FI= Faralon Islands, SC= Santa Cruz, SCL= Santa Clara, M= Monterey, SLO= San Luis Obisbo, SB= Santa Barbara, V= Ventura, SD= San Diego).

COUNTY	SEALS	%TOTAL	#SITES	#OCCUPIED	SEALS/SITE
DN	977	7	14	9	109
H	1140	8	57	26	44
MEN	1996	14	84	44	45
SON	1233	9	105	51	24
MAR	2470	18	60	27	91
CC	86	<1	1	1	86
SF	63	<1	1	1	63
ALA	182	1	3	3	61
SM	844	6	41	23	37
FI	42	<1	*	*	*
SC	366	3	13	8	46
SCL	0	0	1	1	0
M	1528	11	124	60	25
SLO	1484	11	108	51	29
V	99	<1	1	1	99
SB	1390	10	30	18	77
SD	13	<1	4	1	13
TOTAL	13,913	100	648	326	43

*MULTIPLE SITES INCLUDED AS ONE COUNT

TABLE 2. Southern California Channel Island harbor seal counts by year (SCI=San Clemente Island, CAT=Santa Catalina Island, SBI=Santa Barbara Island, SNI=San Nicolas Island, ANA= Anacapa Island, SCR=Santa Rosa Island, SMI= San Miguel Island).

	SCI	CAT	SBI	SNI	ANA	SCR	SRI	SMI	TOT
1982[1]	8	68	2	694[2]	226	769	1008	1090	3865
1983	31[3]	82[3]	0	694[3]	163[4]	588[4]	910[4]	1004[4]	3472
1984[5]	58	174	0	380	116	888	938	664	3218
1985[6]	67	117	31	139	207	515	585	619	2280
1986	46	37	11	207	47[7]	117	487	1123	1801

[1]Stewart 1982
[2]Stewart and Yochem 1984A
[3]Estimate by the authors
[4]Stewart and Yochem 1984B
[5]Hanan et al. 1986A
[6]Hanan et al. 1986B
[7]Only one site photographed due to fog

TABLE 3. Summary of harbor seal counts for the years 1982, 1983, 1984, 1985, and 1986.

	1982	1983	1984	1985	1986
# of hauling sites identified	426	482	518	581	648
# sites occupied	243	185	218	276	325
% occupied	57%	38%	42%	47%	50%
# seals counted	13,026	10,752	10,885	12,530	13,913
% north of SF	56%	56%	63%	57%	57%
SoCal Islands	3,865	3,472	3,218	2,280	1,801
CALIFORNIA TOTAL	16,891	14,224	14,103	14,810	15,714

APPENDIX I. Census results for the 1986 harbor seal survey along the California coast. Date= date of count; Site= site number; Prob (source possibly effecting count): C= camera, D= disturbance, F= fog; Time= time of count or photograph; FA= count of adult seals from photograph; FP= count of pups from photograph; FT= total seals from photograph; GA= ground count of adult seals; GP= ground count of pups; GT= total seals from ground count; ET= higher total from FT or GT; Max= maximum count to date for a site.

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	000.1			0	0	0	0	0	0	0	7
	001.0			0	0	0	0	0	0	0	0
	002.0			0	0	0	0	0	0	0	12
6/02/86	003.0		1000	0	0	5	13	0	13	13	24
6/02/86	004.0		1330	82	9	91	99	0	99	99	99
6/05/86	005.0		1508	0	0	0	64	4	68	68	116
6/02/86	006.0		1436	1	0	1	3	0	3	3	3
6/02/86	007.0		1222	0	0	35	30	0	30	35	53
	008.0			0	0	0	0	0	0	0	10
6/02/86	009.0		1232	0	0	4	0	0	0	4	70
6/02/86	010.0		1238	0	0	62	0	0	0	62	205
6/02/86	010.1		1239	0	0	1	0	0	0	1	1
6/02/86	011.0		1530	0	0	303	372	13	385	385	554
6/02/86	012.0		1256	0	0	18	0	0	0	18	38
6/02/86	013.0		1259	0	0	1	0	0	0	1	19
	013.1			0	0	0	0	0	0	0	2
6/02/86	014.0		1305	0	0	0	0	0	0	1	13
	014.1			0	0	0	0	0	0	0	31
6/03/86	014.4		1306	0	0	128	271	19	290	290	290
6/02/86	014.6		1415	0	0	0	136	4	140	140	140
6/02/86	014.8		1415	0	0	0	70	0	70	70	70
	015.0			0	0	0	0	0	0	0	247
	015.1			0	0	0	0	0	0	0	228
	015.2			0	0	0	0	0	0	0	119
6/02/86	016.0		1307	0	0	107	0	0	0	107	107
6/02/86	017.0		1309	0	0	0	0	0	0	0	57
	018.0			0	0	0	0	0	0	0	127
6/02/86	019.0		1318	0	0	92	0	0	0	92	100
6/02/86	020.0		1324	0	0	43	0	0	0	43	43
6/02/86	021.0		1328	0	0	3	0	0	0	3	6
	021.1			0	0	0	0	0	0	0	10
	021.2			0	0	0	0	0	0	0	26
	021.3			0	0	0	0	0	0	0	2
6/02/86	022.0		1332	0	0	67	0	0	0	67	67
6/02/86	023.0		1333	0	0	0	0	0	0	0	1
	023.1			0	0	0	0	0	0	0	34
	024.0			0	0	0	0	0	0	0	58
6/02/86	025.0		1346	0	0	110	0	0	0	110	138
	026.0			0	0	0	0	0	0	0	51

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	026.1			0	0	0	0	0	0	0	22
	027.0			0	0	0	0	0	0	0	29
	028.0			0	0	0	0	0	0	0	20
	029.0			0	0	0	0	0	0	0	2
6/02/86	030.0		1355	0	0	0	0	0	0	0	2
	031.0			0	0	0	0	0	0	0	67
6/02/86	031.1		1353	0	0	6	0	0	0	6	12
	032.0			0	0	0	0	0	0	0	4
	033.0			0	0	0	0	0	0	0	14
	033.1			0	0	0	0	0	0	0	16
6/02/86	033.2	C	1357	0	0	17	0	0	0	17	28
6/02/86	034.0		1357	0	0	10	0	0	0	10	20
	034.1			0	0	0	0	0	0	0	38
6/02/86	035.0		1357	0	0	26	0	0	0	26	58
	035.1			0	0	0	0	0	0	0	3
6/02/86	036.0		1357	0	0	32	0	0	0	32	32
6/02/86	037.0		1358	0	0	34	0	0	0	34	61
	038.0			0	0	0	0	0	0	0	9
6/02/86	039.0		1358	0	0	146	0	0	0	146	146
6/02/86	039.1		1358	0	0	9	0	0	0	9	9
	040.0			0	0	0	0	0	0	0	126
	040.1			0	0	0	0	0	0	0	1
6/02/86	041.0		1401	0	0	41	0	0	0	41	57
	041.1			0	0	0	0	0	0	0	49
6/02/86	041.2		1403	0	0	14	0	0	0	14	14
6/02/86	042.0		1403	0	0	5	0	0	0	5	36
6/02/86	042.1		1403	0	0	16	0	0	0	16	16
	043.0			0	0	0	0	0	0	0	21
6/02/86	043.1		1404	0	0	2	0	0	0	2	2
6/02/86	044.0		1405	0	0	0	0	0	0	1	24
6/02/86	045.0	D	1406	0	0	14	0	0	0	14	22
6/04/86	046.0		1400	0	0	25	28	1	29	29	41
	046.1			0	0	0	0	0	0	0	1
	047.0			0	0	0	0	0	0	0	13
	048.0			0	0	0	0	0	0	0	22
6/02/86	049.0		1415	0	0	53	0	0	0	53	95
	050.0			0	0	0	0	0	0	0	86
	051.0			0	0	0	0	0	0	0	15
6/02/86	052.0		1416	0	0	24	0	0	0	24	100
6/02/86	053.0		1416	0	0	97	20	2	22	97	197
6/02/86	054.0		1416	0	0	14	0	0	0	14	65
6/02/86	055.0		1416	0	0	47	0	0	0	47	101
	055.1			0	0	0	0	0	0	0	30
6/02/86	055.2		1417	0	0	12	0	0	0	12	12
	056.0			0	0	0	0	0	0	0	50
	056.1			0	0	0	0	0	0	0	39
	056.2			0	0	0	0	0	0	0	7
	057.0			0	0	0	0	0	0	0	46
6/02/86	057.1		1418	0	0	30	0	0	0	30	30
	057.2			0	0	0	0	0	0	0	14
6/02/86	058.0		1420	0	0	15	0	0	0	15	67

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/02/86	058.1		1420	0	0	34	0	0	0	34	51
	059.0			0	0	0	0	0	0	0	8
	060.0			0	0	0	0	0	0	0	11
	061.0			0	0	0	0	0	0	0	12
	062.0			0	0	0	0	0	0	0	17
	063.0			0	0	0	0	0	0	0	19
6/02/86	064.0		1422	0	0	11	0	0	0	11	27
6/02/86	065.0		1423	0	0	21	0	0	0	21	43
	065.1			0	0	0	0	0	0	0	1
	065.2			0	0	0	0	0	0	0	28
	066.0			0	0	0	0	0	0	0	51
6/02/86	066.1		1424	0	0	45	0	0	0	45	45
	066.2			0	0	0	0	0	0	0	1
6/02/86	067.0		1424	0	0	6	0	0	0	6	26
	068.0			0	0	0	0	0	0	0	15
	068.1			0	0	0	0	0	0	0	15
6/02/86	068.2		1425	0	0	13	0	0	0	13	13
6/02/86	068.3		1427	0	0	1	0	0	0	1	1
6/02/86	069.0		1434	0	0	4	0	0	0	4	15
6/02/86	069.1		1435	0	0	9	0	0	0	9	15
6/02/86	070.0		1435	0	0	28	0	0	0	28	28
	070.1			0	0	0	0	0	0	0	8
6/02/86	071.0	C	1437	0	0	74	0	0	0	74	87
	071.1			0	0	0	0	0	0	0	2
6/02/86	072.0		1437	0	0	20	0	0	0	20	68
	073.0			0	0	0	0	0	0	0	13
	073.1			0	0	0	0	0	0	0	22
6/02/86	074.0		1440	0	0	55	51	3	54	55	68
6/02/86	074.1		1441	0	0	0	0	0	0	2	2
6/02/86	075.0		1443	0	0	11	0	0	0	11	23
6/02/86	075.1		1444	0	0	0	0	0	0	2	2
6/02/86	076.0		1446	81	1	82	0	0	0	82	90
6/02/86	076.1		1446	0	0	24	0	0	0	24	40
	077.0			0	0	0	0	0	0	0	17
6/02/86	077.1		1446	0	0	4	0	0	0	4	4
6/02/86	078.0		1447	0	0	25	0	0	0	25	104
6/02/86	079.0		1448	0	0	36	0	0	0	36	64
6/02/86	079.1		1449	0	0	0	0	0	0	4	4
	080.0			0	0	0	0	0	0	0	33
	080.1			0	0	0	0	0	0	0	16
	081.0			0	0	0	0	0	0	0	18
	081.1			0	0	0	0	0	0	0	8
	081.2			0	0	0	0	0	0	0	20
	081.3			0	0	0	0	0	0	0	10
	082.0			0	0	0	0	0	0	0	70
	083.0			0	0	0	0	0	0	0	58
6/02/86	084.0		1454	0	0	4	0	0	0	4	11
6/02/86	085.0	C	1458	0	0	109	0	0	0	109	122
6/02/86	086.0		1500	0	0	0	0	0	0	3	68
6/02/86	087.0		1504	0	0	53	0	0	0	53	138
	087.1			0	0	0	0	0	0	0	0

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	088.0			0	0	0	0	0	0	0	5
	089.0			0	0	0	0	0	0	0	20
	090.0			0	0	0	0	0	0	0	15
6/02/86	091.0	C	1506	0	0	1	0	0	0	1	1
	091.1			0	0	0	0	0	0	0	21
6/02/86	092.0		1508	0	0	0	0	0	0	6	12
6/02/86	093.0		1509	0	0	0	0	0	0	1	1
	093.1			0	0	0	0	0	0	0	9
	094.0			0	0	0	0	0	0	0	2
6/02/86	094.1	C	1511	0	0	9	0	0	0	9	10
	094.2			0	0	0	0	0	0	0	4
	094.3			0	0	0	0	0	0	0	1
6/02/86	094.4	C	1511	0	0	6	0	0	0	6	6
6/02/86	094.5		1511	0	0	0	0	0	0	1	1
	095.0			0	0	0	0	0	0	0	15
6/02/86	096.0	C	1512	0	0	1	0	0	0	1	1
6/02/86	096.1		1512	0	0	0	0	0	0	1	14
	096.2			0	0	0	0	0	0	0	2
	096.3			0	0	0	0	0	0	0	1
	096.4			0	0	0	0	0	0	0	3
6/02/86	097.0		1513	0	0	20	0	0	0	20	22
6/02/86	098.0	C	1514	0	0	43	0	0	0	43	59
	099.0			0	0	0	0	0	0	0	5
6/02/86	099.1		1515	0	0	0	0	0	0	1	7
	099.2			0	0	0	0	0	0	0	3
	100.0			0	0	0	0	0	0	0	9
	101.0			0	0	0	0	0	0	0	14
6/02/86	102.0	C	1517	0	0	28	0	0	0	28	44
6/02/86	102.1		1517	0	0	0	0	0	0	2	2
	103.0			0	0	0	0	0	0	0	1
6/02/86	104.0		1519	0	0	5	0	0	0	5	7
6/02/86	104.1		1519	0	0	3	0	0	0	3	3
6/02/86	104.2		1519	0	0	0	0	0	0	1	1
6/02/86	104.3		1519	0	0	0	0	0	0	1	1
	105.0			0	0	0	0	0	0	0	6
6/02/86	105.1		1520	0	0	0	0	0	0	5	5
	106.0			0	0	0	0	0	0	0	1
6/02/86	106.1	C	1523	0	0	1	0	0	0	1	1
6/02/86	107.0		1523	0	0	6	0	0	0	6	34
6/02/86	107.1		1523	0	0	0	0	0	0	5	5
6/02/86	108.0		1524	0	0	10	0	0	0	10	15
	109.0			0	0	0	0	0	0	0	10
6/02/86	110.0	C	1526	0	0	190	0	0	0	190	201
	111.0			0	0	0	0	0	0	0	15
	112.0			0	0	0	0	0	0	0	13
	113.0			0	0	0	0	0	0	0	37
	114.0			0	0	0	0	0	0	0	71
	114.1			0	0	0	0	0	0	0	3
	114.2			0	0	0	0	0	0	0	8
6/02/86	114.3		1528	0	0	3	0	0	0	3	3
6/02/86	114.4		1528	0	0	9	0	0	0	9	9

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/02/86	114.5		1528	0	0	6	0	0	0	6	6
	115.0			0	0	0	0	0	0	0	46
6/02/86	116.0		1530	0	0	2	0	0	0	2	4
	117.0			0	0	0	0	0	0	0	29
	118.0			0	0	0	0	0	0	0	13
6/02/86	118.1		1532	0	0	4	0	0	0	4	4
	119.0			0	0	0	0	0	0	0	3
6/02/86	119.1	C	1532	0	0	6	0	0	0	6	12
	120.0			0	0	0	0	0	0	0	2
	121.0			0	0	0	0	0	0	0	3
	122.0			0	0	0	0	0	0	0	18
	123.0			0	0	0	0	0	0	0	1
	124.0			0	0	0	0	0	0	0	1
6/02/86	125.0	C	1534	0	0	4	0	0	0	4	13
	126.0			0	0	0	0	0	0	0	11
6/02/86	127.0		1538	0	0	43	0	0	0	43	97
	128.0			0	0	0	0	0	0	0	1
6/02/86	129.0		1542	0	0	33	0	0	0	33	42
6/02/86	130.0		1544	0	0	119	0	0	0	119	266
6/02/86	130.1		1548	0	0	7	0	0	0	8	8
	131.0			0	0	0	0	0	0	0	29
	131.1			0	0	0	0	0	0	0	56
	131.2			0	0	0	0	0	0	0	3
	131.3			0	0	0	0	0	0	0	64
	132.0			0	0	0	0	0	0	0	32
6/02/86	132.1		1548	0	0	8	0	0	0	8	8
6/02/86	133.0		1549	0	0	159	0	0	0	159	159
6/02/86	134.0		1551	0	0	6	0	0	0	6	12
	134.1			0	0	0	0	0	0	0	4
	134.2			0	0	0	0	0	0	0	10
6/02/86	134.5		1551	0	0	10	0	0	0	10	10
	135.0			0	0	0	0	0	0	0	38
	136.0			0	0	0	0	0	0	0	10
	137.0			0	0	0	0	0	0	0	5
	137.1			0	0	0	0	0	0	0	2
6/02/86	138.0		1555	0	0	16	0	0	0	16	26
6/02/86	138.1		1556	0	0	0	0	0	0	2	2
	139.0			0	0	0	0	0	0	0	14
6/02/86	139.1		1557	0	0	9	0	0	0	9	9
6/02/86	140.0		1557	0	0	0	0	0	0	3	19
	140.1			0	0	0	0	0	0	0	1
6/02/86	141.0	C	1558	0	0	10	0	0	0	10	71
	141.1			0	0	0	0	0	0	0	3
6/02/86	142.0	C	1559	0	0	6	0	0	0	6	31
	143.0			0	0	0	0	0	0	0	2
6/02/86	144.0		1603	0	0	11	0	0	0	11	28
	145.0			0	0	0	0	0	0	0	25
6/02/86	146.0	C	1604	0	0	37	0	0	0	37	37
	147.0			0	0	0	0	0	0	0	48
6/03/86	148.0		1335	0	0	22	0	0	0	22	36
6/02/86	149.0		1609	0	0	29	0	0	0	30	71

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/03/86	150.0		1336	0	0	49	0	0	0	49	96
6/03/86	151.0	C	1339	76	2	78	0	0	0	78	78
6/03/86	152.0		1341	32	0	32	0	0	0	32	42
6/03/86	153.0	C	1341	23	1	24	0	0	0	24	93
	154.0			0	0	0	0	0	0	0	58
	154.1			0	0	0	0	0	0	0	2
6/03/86	155.0		1342	65	0	65	0	0	0	65	65
	155.1			0	0	0	0	0	0	0	17
6/02/86	156.0		1612	0	0	18	0	0	0	18	63
	156.1			0	0	0	0	0	0	0	54
6/03/86	157.0		1344	173	2	175	158	13	171	175	175
6/03/86	157.1		1345	1	0	1	0	0	0	1	1
	158.0			0	0	0	0	0	0	0	18
	159.0			0	0	0	0	0	0	0	6
6/03/86	160.0		1347	44	1	45	0	0	0	45	45
6/03/86	160.05	C	1348	3	0	3	0	0	0	3	3
	160.1			0	0	0	0	0	0	0	9
	161.0			0	0	0	0	0	0	0	49
	161.1			0	0	0	0	0	0	0	9
	161.2			0	0	0	0	0	0	0	6
6/03/86	162.0		1350	100	3	103	0	0	0	103	149
	162.1			0	0	0	0	0	0	0	1
	163.0			0	0	0	0	0	0	0	7
6/03/86	164.0		1530	0	0	19	21	1	22	22	38
6/02/86	165.0	C	1300	0	0	8	20	0	20	20	68
6/03/86	166.0		1411	0	0	113	0	0	0	113	138
6/03/86	167.0		1413	167	2	169	0	0	0	169	169
	168.0			0	0	0	0	0	0	0	29
6/03/86	169.0		1418	26	2	28	0	0	0	28	40
	170.0			0	0	0	0	0	0	0	1
6/03/86	170.1		1419	0	0	1	0	0	0	1	1
	171.0			0	0	0	0	0	0	0	33
	172.0			0	0	0	0	0	0	0	120
	173.0			0	0	0	0	0	0	0	53
6/03/86	174.0		1422	0	0	5	0	0	0	5	80
6/03/86	175.0		1423	0	0	26	0	0	0	26	81
	176.0			0	0	0	0	0	0	0	31
6/03/86	177.0		1429	0	0	87	0	0	0	87	90
6/03/86	178.0		1433	0	0	116	0	0	0	116	116
	179.0			0	0	0	0	0	0	0	36
6/03/86	180.0		1436	0	0	5	0	0	0	5	44
	181.0			0	0	0	0	0	0	0	17
6/03/86	182.0		1437	0	0	2	0	0	0	2	3
6/03/86	182.1		1437	0	0	1	0	0	0	1	3
6/03/86	182.2		1438	0	0	4	0	0	0	4	4
	183.0			0	0	0	0	0	0	0	4
	184.0			0	0	0	0	0	0	0	1
6/03/86	185.0		1440	0	0	10	0	0	0	10	19
6/03/86	186.0		1442	0	0	2	0	0	0	2	12
6/03/86	186.1		1442	0	0	0	0	0	0	1	1
	187.0			0	0	0	0	0	0	0	8

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/03/86	188.0		1443	106	0	106	0	0	0	106	109
	189.0			0	0	0	0	0	0	0	11
6/03/86	190.0		1444	38	4	42	0	0	0	42	71
	191.0			0	0	0	0	0	0	0	21
6/03/86	191.1		1445	0	0	6	0	0	0	6	6
6/03/86	192.0		1445	10	1	11	0	0	0	11	34
	193.0			0	0	0	0	0	0	0	24
	193.1			0	0	0	0	0	0	0	5
6/03/86	194.0		1447	0	0	54	0	0	0	54	54
6/03/86	194.1		1448	0	0	0	0	0	0	1	1
6/03/86	195.0	C	1455	0	0	2	0	0	0	2	40
	195.1			0	0	0	0	0	0	0	20
6/03/86	196.0		1457	0	0	29	0	0	0	29	33
6/03/86	196.1		1457	0	0	15	0	0	0	15	19
6/03/86	197.0		1501-1502	120	1	121	0	0	0	121	122
	197.1			0	0	0	0	0	0	0	100
6/03/86	198.0		1503	0	0	90	0	0	0	90	125
6/03/86	198.1		1503	0	0	25	0	0	0	25	25
	199.0			0	0	0	0	0	0	0	45
	200.0			0	0	0	0	0	0	0	58
	200.1			0	0	0	0	0	0	0	24
6/03/86	201.0		1506	0	0	19	0	0	0	19	34
	201.1			0	0	0	0	0	0	0	3
6/03/86	202.0		1510-1512	0	0	58	0	0	0	58	58
	202.1			0	0	0	0	0	0	0	0
	203.0			0	0	0	0	0	0	0	67
6/03/86	204.0		1115-1117	0	0	11	0	0	0	11	14
6/03/86	205.0		1113	147	0	147	0	0	0	147	327
6/03/86	206.0		1109	0	0	24	0	0	0	24	24
6/03/86	207.0		1136	41	0	41	0	0	0	41	65
	208.0			0	0	0	0	0	0	0	17
6/03/86	209.0		1528	0	0	63	0	0	0	63	63
	210.0			0	0	0	0	0	0	0	1
	211.0			0	0	0	0	0	0	0	30
	212.0			0	0	0	0	0	0	0	97
6/03/86	213.0		1535	0	0	86	0	0	0	86	99
	214.0			0	0	0	0	0	0	0	8
6/03/86	215.0		1546	24	0	24	0	0	0	24	34
	215.1			0	0	0	0	0	0	0	1
6/03/86	216.0		1548	4	0	4	0	0	0	4	5
6/03/86	216.1		1549	0	0	0	0	0	0	1	1
6/03/86	217.0		1554	68	1	69	0	0	0	69	143
	217.1			0	0	0	0	0	0	0	2
6/03/86	218.0		1556	183	0	183	0	0	0	183	185
	218.1			0	0	0	0	0	0	0	24
6/03/86	219.0		1558	9	0	9	0	0	0	9	19
6/03/86	219.1		1559	1	0	1	0	0	0	1	1
	219.2			0	0	0	0	0	0	0	1
	219.3			0	0	0	0	0	0	0	4
6/03/86	220.0		1601	19	0	19	0	0	0	19	93
6/04/86	221.0		1530	0	0	498	536	53	589	589	831

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/03/86	222.0		1603	9	0	9	0	0	0	9	11
	223.0			0	0	0	0	0	0	0	3
6/03/86	224.0		1609	300	0	300	0	0	0	300	509
6/03/86	225.0		1611-1614	303	6	309	0	0	0	309	726
	226.0			0	0	0	0	0	0	0	66
	226.1			0	0	0	0	0	0	0	21
	226.2			0	0	0	0	0	0	0	72
	226.3			0	0	0	0	0	0	0	12
	227.0			0	0	0	0	0	0	0	34
	228.0			0	0	0	0	0	0	0	29
	229.0			0	0	0	0	0	0	0	0
	230.0			0	0	0	0	0	0	0	124
6/03/86	231.0		1620	21	1	22	0	0	0	22	101
6/03/86	232.0		1621	90	0	90	0	0	0	90	90
	232.1			0	0	0	0	0	0	0	11
6/03/86	232.2		1621	70	0	70	0	0	0	70	70
6/03/86	232.3		1621	1	0	1	0	0	0	1	1
	233.0			0	0	0	0	0	0	0	31
	234.0			0	0	0	0	0	0	0	13
	235.0			0	0	0	0	0	0	0	17
	236.0			0	0	0	0	0	0	0	19
	237.0			0	0	0	0	0	0	0	1
6/03/86	238.0		1630	11	0	11	0	0	0	11	20
	239.0			0	0	0	0	0	0	0	24
	240.0			0	0	0	0	0	0	0	0
	240.1			0	0	0	0	0	0	0	3
6/03/86	241.0		1633	32	0	32	0	0	0	32	135
	242.0			0	0	0	0	0	0	0	2
	242.1			0	0	0	0	0	0	0	1
	243.0			0	0	0	0	0	0	0	53
6/03/86	244.0		1635	144	0	144	0	0	0	144	144
	244.1			0	0	0	0	0	0	0	1
6/03/86	245.0		1637	204	0	204	0	0	0	204	419
6/03/86	245.1		1636	1	0	1	0	0	0	1	1
6/03/86	246.0		1636	8	0	8	0	0	0	8	12
6/03/86	247.0		1639	3	0	3	0	0	0	3	5
6/03/86	248.0		1640	280	0	280	0	0	0	280	338
	248.1			0	0	0	0	0	0	0	72
6/03/86	248.5		1641	30	0	30	0	0	0	30	30
6/03/86	249.0		1645	35	0	35	0	0	0	35	236
	249.1			0	0	0	0	0	0	0	1
6/03/86	249.5		1650	22	0	22	0	0	0	22	22
	250.0			0	0	0	0	0	0	0	3
6/03/86	251.0		1653-1656	88	0	88	0	0	0	88	115
6/03/86	252.0		1657	0	0	0	0	0	0	1	11
6/03/86	253.0		1659	4	0	4	0	0	0	4	11
	254.0			0	0	0	0	0	0	0	9
6/03/86	255.0		1702	17	0	17	0	0	0	17	18
	255.1			0	0	0	0	0	0	0	16
	256.0			0	0	0	0	0	0	0	8
6/03/86	257.0		1703	15	0	15	0	0	0	15	47

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	258.0			0	0	0	0	0	0	0	2
	259.0			0	0	0	0	0	0	0	1
6/03/86	259.1		1705	1	0	1	0	0	0	1	1
	260.0			0	0	0	0	0	0	0	2
6/03/86	260.1		1706	1	0	1	0	0	0	1	1
	261.0			0	0	0	0	0	0	0	3
6/04/86	261.1			0	0	0	0	0	0	1	10
6/04/86	261.2		1406-1407	18	0	18	0	0	0	18	18
6/03/86	262.0		1615	211	0	211	258	0	258	258	258
	263.0			0	0	0	0	0	0	0	31
	263.1			0	0	0	0	0	0	0	21
	263.2			0	0	0	0	0	0	0	8
	264.0			0	0	0	0	0	0	0	26
6/04/86	264.1		1414	12	0	12	0	0	0	12	12
	265.0			0	0	0	0	0	0	0	10
6/04/86	265.1		1417	4	0	4	0	0	0	4	5
	266.0			0	0	0	0	0	0	0	13
	267.0			0	0	0	0	0	0	0	5
6/04/86	268.0		1417	15	0	15	0	0	0	15	16
	268.1			0	0	0	0	0	0	0	4
	269.0			0	0	0	0	0	0	0	13
	270.0			0	0	0	0	0	0	0	9
6/04/86	270.1		1419	1	0	1	0	0	0	1	3
	270.2			0	0	0	0	0	0	0	1
6/04/86	271.0		1419-1422	14	0	14	0	0	0	14	28
	272.0			0	0	0	0	0	0	0	14
	272.1			0	0	0	0	0	0	0	1
6/04/86	273.0		1422	10	0	10	0	0	0	10	70
6/04/86	273.1		1422	0	0	1	0	0	0	1	1
6/04/86	274.0	C	1423	4	0	4	0	0	0	4	22
	274.1			0	0	0	0	0	0	0	17
6/04/86	275.0	C	1424	12	0	12	0	0	0	12	20
	276.0			0	0	0	0	0	0	0	21
6/04/86	276.1		1425	29	0	29	0	0	0	29	29
6/04/86	277.0		1425	37	0	37	0	0	0	37	51
6/04/86	277.1		1425	1	0	1	0	0	0	1	3
	278.0			0	0	0	0	0	0	0	0
	279.0			0	0	0	0	0	0	0	1
	280.0			0	0	0	0	0	0	0	9
6/04/86	281.0		1429	32	0	32	0	0	0	32	57
	282.0			0	0	0	0	0	0	0	50
6/04/86	282.1		1430	2	0	2	0	0	0	2	3
	283.0			0	0	0	0	0	0	0	10
6/04/86	283.1		1430	1	0	1	0	0	0	1	1
6/04/86	283.2		1436	12	0	12	0	0	0	12	12
6/04/86	284.0		1438	5	0	5	0	0	0	5	29
	284.1			0	0	0	0	0	0	0	5
	284.2			0	0	0	0	0	0	0	3
	284.3			0	0	0	0	0	0	0	1
	285.0			0	0	0	0	0	0	0	57
	285.1			0	0	0	0	0	0	0	16

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	285.2			0	0	0	0	0	0	0	10
6/04/86	285.4		1438	4	0	4	0	0	0	4	4
	286.0			0	0	0	0	0	0	0	0
6/04/86	286.5		1439	3	0	3	0	0	0	3	3
6/04/86	287.0		1439	49	0	49	0	0	0	49	67
	287.1			0	0	0	0	0	0	0	3
6/04/86	287.2		1441	1	0	1	0	0	0	1	1
6/04/86	288.0		1441	10	0	10	0	0	0	10	10
	289.0			0	0	0	0	0	0	0	10
	290.0			0	0	0	0	0	0	0	34
6/04/86	291.0		1443	7	0	7	0	0	0	7	9
	291.1			0	0	0	0	0	0	0	1
	292.0			0	0	0	0	0	0	0	1
	293.0			0	0	0	0	0	0	0	18
6/04/86	294.0		1446	14	0	14	0	0	0	14	26
	294.1			0	0	0	0	0	0	0	5
	295.0			0	0	0	0	0	0	0	40
6/04/86	296.0		1447	67	2	69	0	0	0	69	79
6/04/86	296.1		1445	2	0	2	0	0	0	2	2
	297.0			0	0	0	0	0	0	0	4
	297.1			0	0	0	0	0	0	0	35
6/04/86	298.0		1503-1504	21	0	21	0	0	0	21	26
6/04/86	298.1		1504	48	0	48	0	0	0	48	48
	298.2			0	0	0	0	0	0	0	4
	299.0			0	0	0	0	0	0	0	36
	299.1			0	0	0	0	0	0	0	29
	300.0			0	0	0	0	0	0	0	1
6/04/86	300.1		1506	1	0	1	0	0	0	1	1
	301.0			0	0	0	0	0	0	0	1
6/04/86	301.1		1506	22	1	23	0	0	0	23	23
6/04/86	302.0		1507	62	0	62	0	0	0	62	125
6/04/86	303.0		1507	5	0	5	0	0	0	6	17
6/04/86	304.0		1509	17	0	17	0	0	0	17	39
6/04/86	305.0		1512	41	0	41	0	0	0	41	53
	306.0			0	0	0	0	0	0	0	1
6/04/86	307.0		1509	71	0	71	0	0	0	71	164
6/04/86	308.0		1510	74	0	74	0	0	0	74	74
6/04/86	309.0		1513	43	0	43	0	0	0	43	45
	310.0			0	0	0	0	0	0	0	3
	310.1			0	0	0	0	0	0	0	1
6/04/86	311.0		1515	18	0	18	0	0	0	18	18
6/04/86	312.0		1517	17	0	17	0	0	0	17	17
	312.1			0	0	0	0	0	0	0	27
6/04/86	313.0		1517	27	0	27	0	0	0	27	54
6/04/86	313.1		1518	9	0	9	0	0	0	9	9
	314.0			0	0	0	0	0	0	0	4
6/04/86	315.0	C	1520	41	0	41	0	0	0	41	48
	315.1			0	0	0	0	0	0	0	4
6/04/86	316.0		1523	28	0	28	0	0	0	28	35
	316.1			0	0	0	0	0	0	0	1
	317.0			0	0	0	0	0	0	0	13

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	317.1			0	0	0	0	0	0	0	3
6/04/86	318.0		1524-1525	16	0	16	0	0	0	16	19
6/04/86	318.1		1525	25	0	25	0	0	0	25	25
	319.0			0	0	0	0	0	0	0	5
	319.1			0	0	0	0	0	0	0	4
6/04/86	320.0		1528	56	0	56	0	0	0	56	69
6/04/86	321.0		1532	15	0	15	0	0	0	15	15
	322.0			0	0	0	0	0	0	0	0
	323.0			0	0	0	0	0	0	0	28
	324.0			0	0	0	0	0	0	0	53
	324.1			0	0	0	0	0	0	0	2
6/04/86	325.0		1538	22	2	24	0	0	0	25	27
6/04/86	325.1		1539	31	4	35	0	0	0	35	35
6/04/86	326.0		1543	142	3	145	0	0	0	145	145
6/04/86	327.0		1548	22	0	22	0	0	0	22	48
	327.1			0	0	0	0	0	0	0	24
6/04/86	328.0		1548	16	0	16	0	0	0	16	49
6/04/86	329.0		1550	46	0	46	0	0	0	46	46
6/04/86	329.1		1552	1	0	1	0	0	0	2	2
6/04/86	330.0		1553	32	0	32	0	0	0	32	37
	331.0			0	0	0	0	0	0	0	1
6/04/86	332.0		1558	94	0	94	0	0	0	94	176
6/04/86	332.5		1600	7	0	7	0	0	0	7	7
6/04/86	333.0		1601	35	0	35	0	0	0	35	60
6/04/86	334.0		1601	73	0	73	0	0	0	73	73
	335.0			0	0	0	0	0	0	0	36
	335.1			0	0	0	0	0	0	0	5
6/04/86	336.0		1603	6	0	6	0	0	0	6	19
	336.1			0	0	0	0	0	0	0	10
	336.2			0	0	0	0	0	0	0	1
6/04/86	337.0		1606	19	0	19	0	0	0	19	37
	337.1			0	0	0	0	0	0	0	2
6/04/86	338.0		1608	33	4	37	0	0	0	37	52
	338.1			0	0	0	0	0	0	0	1
	339.0			0	0	0	0	0	0	0	38
6/04/86	339.1		1609	12	0	12	0	0	0	12	17
6/04/86	340.0		1609	13	0	13	0	0	0	13	18
6/04/86	340.05		1610	1	0	1	0	0	0	1	1
6/04/86	340.1		1611	22	1	23	0	0	0	23	23
6/04/86	341.0		1611	98	0	98	0	0	0	98	98
	342.0			0	0	0	0	0	0	0	32
	342.1			0	0	0	0	0	0	0	25
6/04/86	343.0		1617	24	0	24	0	0	0	24	31
	343.1			0	0	0	0	0	0	0	20
6/04/86	344.0		1618	19	0	19	0	0	0	19	22
	345.0			0	0	0	0	0	0	0	31
6/04/86	345.05		1619	12	1	13	0	0	0	13	13
6/04/86	345.1		1621	24	0	24	0	0	0	24	24
	346.0			0	0	0	0	0	0	0	41
	347.0			0	0	0	0	0	0	0	21
	348.0			0	0	0	0	0	0	0	33

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/04/86	349.0		1625	16	0	16	0	0	0	16	51
6/04/86	349.1		1626	16	0	16	0	0	0	16	16
	350.0		1626	4	0	4	0	0	0	4	27
	351.0			0	0	0	0	0	0	0	2
6/04/86	352.0		1627	138	0	138	0	0	108	138	183
6/04/86	352.1		1628	29	0	29	0	0	0	29	29
6/04/86	352.2		1632	24	0	24	0	0	0	24	24
6/04/86	353.0		1632	15	2	17	0	0	0	17	55
6/04/86	354.0		1636	46	0	46	0	0	0	46	46
	355.0			0	0	0	0	0	0	0	9
	355.1			0	0	0	0	0	0	0	4
	356.0			0	0	0	0	0	0	0	67
6/04/86	356.1		1643	90	2	92	0	0	0	92	100
	357.0			0	0	0	0	0	0	0	14
	358.0			0	0	0	0	0	0	0	25
6/04/86	359.0		1647	3	0	3	0	0	0	4	14
	359.1			0	0	0	0	0	0	0	1
6/04/86	360.0		1651	44	0	44	0	0	0	44	58
	361.0			0	0	0	0	0	0	0	186
	362.0			0	0	0	0	0	0	0	78
6/04/86	363.0		1652	401	0	401	0	0	0	401	839
	364.0			0	0	0	0	0	0	0	13
	365.0			0	0	0	0	0	0	0	52
	366.0			0	0	0	0	0	0	0	240
6/04/86	366.1		1655	142	0	142	0	0	0	142	142
	367.0			0	0	0	0	0	0	0	10
6/04/86	367.1		1704	21	0	21	0	0	0	21	21
	368.0			0	0	0	0	0	0	0	43
	368.1			0	0	0	0	0	0	0	33
	369.0			0	0	0	0	0	0	0	13
	369.1			0	0	0	0	0	0	0	1
	370.0			0	0	0	0	0	0	0	3
6/04/86	371.0		1715	9	0	9	0	0	0	9	25
	372.0			0	0	0	0	0	0	0	3
6/04/86	373.0		1721	133	0	133	0	0	0	133	172
	373.1			0	0	0	0	0	0	0	34
6/04/86	374.0		1722	20	3	23	0	0	0	23	28
	375.0			0	0	0	0	0	0	0	10
6/04/86	376.0		1722	4	0	4	0	0	0	4	4
	377.0			0	0	0	0	0	0	0	4
	378.0			0	0	0	0	0	0	0	5
	378.1			0	0	0	0	0	0	0	2
	379.0			0	0	0	0	0	0	0	3
	380.0			0	0	0	0	0	0	0	15
	380.1			0	0	0	0	0	0	0	4
6/04/86	380.2		1733	2	0	2	0	0	0	2	2
	381.0			0	0	0	0	0	0	0	46
	381.1			0	0	0	0	0	0	0	441
	381.2			0	0	0	0	0	0	0	81
	381.3			0	0	0	0	0	0	0	15
6/05/86	382.0		1820	312	8	320	346	8	354	354	483

DATE	SITE	PROB	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/05/86	383.0		1540	281	0	281	0	0	0	281	492
6/05/86	384.0		1551	15	0	15	0	0	0	15	518
6/05/86	385.0		1553	76	0	76	0	0	0	76	170
	386.0			0	0	0	0	0	0	0	9
	386.1			0	0	0	0	0	0	0	1
	387.0			0	0	0	0	0	0	0	17
	388.0			0	0	0	0	0	0	0	39
	389.0			0	0	0	0	0	0	0	31
6/05/86	390.0		1604	55	0	55	0	0	0	55	79
	390.1			0	0	0	0	0	0	0	14
	391.0			0	0	0	0	0	0	0	43
6/05/86	392.0		1605	10	0	10	0	0	0	10	19
6/05/86	393.0		1608	20	2	22	0	0	0	22	93
6/05/86	394.0		1608	3	0	3	0	0	0	3	22
6/04/86	395.0		1530	18	1	19	17	3	20	20	32
6/05/86	395.1		1610	1	0	1	0	0	0	1	1
6/05/86	396.0		1611	7	0	7	0	0	0	8	23
	396.1			0	0	0	0	0	0	0	16
6/05/86	397.0		1620	8	0	8	0	0	0	9	12
	398.0			0	0	0	0	0	0	0	43
6/05/86	398.1		1622	6	0	6	0	0	0	6	6
6/05/86	399.0		1623	22	2	24	0	0	0	24	69
6/05/86	400.0		1623	53	0	53	0	0	0	53	67
6/05/86	401.0		1623	1	0	1	0	0	0	1	24
	402.0			0	0	0	0	0	0	0	15
	403.0			0	0	0	0	0	0	0	27
6/05/86	404.0		1625	3	0	3	0	0	0	3	79
6/05/86	405.0		1626	13	0	13	0	0	0	13	30
6/05/86	405.1		1626	1	0	1	0	0	0	1	1
	406.0			0	0	0	0	0	0	0	55
	407.0			0	0	0	0	0	0	0	9
6/05/86	407.1		1635	13	0	13	0	0	0	13	13
6/05/86	408.0		1635	1	0	1	0	0	0	1	10
6/05/86	409.0		1642	61	0	61	0	0	0	61	341
6/05/86	410.0		1645	30	0	30	0	0	0	30	48
	411.0			0	0	0	0	0	0	0	20
6/05/86	412.0		1646	6	0	6	0	0	0	6	56
6/05/86	413.0		1647	72	0	72	0	0	0	72	96
	413.1			0	0	0	0	0	0	0	1
6/05/86	414.0		1651	516	0	516	0	0	0	516	516
6/05/86	415.0		1653	2	0	2	0	0	0	2	100
	416.0			0	0	0	0	0	0	0	61
6/05/86	417.0		1656	0	0	0	0	0	0	1	3
6/05/86	418.0		1700	266	0	266	0	0	0	266	542
	419.0			0	0	0	0	0	0	0	3
6/05/86	420.0		1707	23	0	23	0	0	0	23	23
	421.0			0	0	0	0	0	0	0	9
6/02/86	422.0		1509	0	0	0	0	0	42	42	84

APPENDIX II. Harbor seal counts by site and census (82R= April 1982, 83R= April 1983, 82= May-June 1982, 83= June 1983, 84= June 1984, 85= May-June 1985, 86=June 1986). Rookery sites are underlined.

SITE	82R	83R	82	83	84	85	86	SITE	82R	83R	82	83	84	85	86
0.1					7	0	0	33.1		16		0	0	0	0
1.0	0	0	0	0	0	0	0	33.2						28	17
2.0	0	0	0	0	0	0	0	34.0	11	3	0	0	20	0	10
3.0	19	24	6	13	9	16	13	34.1					38	0	0
4.0	43	67	85	95	94	72	99	35.0	20	14	58	20	2	29	26
5.0	0	93	0	0	5	48	68	35.1		3		0	0	0	0
6.0	8	13	0	0	22	0	3	36.0	0	0	22	13	15	18	32
7.0	14	23	53	0	0	52	35	37.0	16	0	60	0	61	15	34
8.0	0	0	0	0	0	0	0	38.0	9	0	0	0	0	0	0
9.0	0	0	0	0	0	19	4	39.0	29	0	132	66	124	55	146
10.0	12	0	0	205	29	0	62	39.1							9
10.1							1	40.0	0	0	0	0	0	0	0
11.0	242	223	387	554	375	388	385	40.1						1	0
12.0	3	4	38	0	18	30	18	41.0	23	5	7	5	21	0	41
13.0	19	0	9	0	0	0	1	41.1					49	0	0
13.1		2		0	0	0	0	41.2							14
14.0	0	0	0	13	0	0	1	42.0	17	12	9	36	0	27	5
14.1				31	0	13	0	42.1				12	0	0	16
14.4							290	43.0	0	0	21	0	0	12	0
14.6							140	43.1		1		0	0	0	2
14.8							70	44.0	24	12	0	0	0	0	1
15.0	0	143	24	247	0	59	0	45.0	1	22	0	0	0	0	14
15.1						228	0	46.0	41	37	29	41	33	31	29
15.2						119	0	46.1		1		0	0	0	0
16.0	0	0	0	49	71	78	107	47.0	1	0	0	0	0	0	0
17.0	0	23	41	0	0	0	0	48.0	19	0	0	0	0	0	0
18.0	17	0	18	0	0	0	0	49.0	15	0	0	10	0	95	53
19.0	70	21	0	94	100	70	92	50.0	86	0	53	0	0	0	0
20.0	2	0	18	0	0	33	43	51.0	15	0	0	0	0	0	0
21.0	0	0	0	4	0	6	3	52.0	23	0	24	0	0	100	24
21.1				10	0	0	0	53.0	90	80	197	27	13	60	97
21.2					26	0	0	54.0	0	0	49	43	0	63	14
21.3					2	0	0	55.0	0	29	35	101	0	0	47
22.0	60	18	46	51	62	67	67	55.1					30	12	0
23.0	0	0	0	0	0	0	0	55.2							12
23.1				2	0	34	0	56.0	30	50	0	0	0	8	0
24.0	19	0	0	58	0	5	0	56.1		39		12	0	0	0
25.0	81	39	138	0	30	44	110	56.2		7		0	0	2	0
26.0	51	0	0	0	0	0	0	57.0	46	0	0	2	0	0	0
26.1	0	22	0	0	0	0	0	57.1						10	30
27.0	22	0	29	0	0	19	0	57.2						14	0
28.0	0	0	0	0	0	0	0	58.0	0	0	0	18	15	0	15
29.0	0	2	0	0	0	0	0	58.1				51	0	0	34
30.0	0	0	0	0	0	0	0	59.0	3	0	0	0	0	8	0
31.0	40	0	67	0	0	0	0	60.0	10	11	0	0	0	0	0
31.1						12	6	61.0	0	0	4	0	12	12	0
32.0	0	0	1	0	0	0	0	62.0	0	0	17	0	0	0	0
33.0	13	14	0	0	0	0	0	63.0	8	0	19	0	0	0	0

SITE	82R	83R	82	83	84	85	86	SITE	82R	83R	82	83	84	85	86
64.0	27	11	0	9	0	0	11	94.0	0	0	2	0	0	0	0
65.0	32	8	42	43	0	0	21	94.1						10	9
65.1		1		0	0	0	0	94.2						4	0
65.2					28	2	0	94.3						1	0
66.0	17	14	0	51	15	0	0	94.4							6
66.1		10		8	0	9	45	94.5							1
66.2		1			0	0	0	95.0	1	0	7	0	15	0	0
67.0	8	0	0	0	0	3	6	96.0	0	0	1	0	0	0	1
68.0	0	0	0	0	14	0	0	96.1					14	0	1
68.1						15	0	96.2						2	0
68.2							13	96.3						1	0
68.3							1	96.4						3	0
69.0	9	0	15	0	0	0	4	97.0	22	0	1	0	10	15	20
69.1					15	0	9	98.0	24	0	59	10	0	0	43
70.0	18	10	11	0	0	0	28	99.0	0	0	0	0	0	0	0
70.1				8	0	0	0	99.1						7	1
71.0	23	0	8	87	28	56	74	99.2						3	0
71.1					2	0	0	100.0	0	0	9	0	0	0	0
72.0	68	0	23	0	0	21	20	101.0	14	0	9	9	0	0	0
73.0	8	13	0	0	0	0	0	102.0	20	0	44	4	0	0	28
73.1	0	5	0	0	0	1	0	102.1							2
74.0	33	33	50	48	33	45	55	103.0	0	0	1	0	0	0	0
74.1							2	104.0	0	0	7	0	0	0	5
75.0	17	7	0	23	20	3	11	104.1							3
75.1							2	104.2							1
76.0	71	48	0	90	25	58	82	104.3							1
76.1					40	0	24	105.0	0	0	6	0	0	0	0
77.0	5	0	0	17	0	0	0	105.1							5
77.1				1	0	0	4	106.0	0	0	1	0	0	0	0
78.0	54	13	41	0	0	0	25	106.1							1
79.0	45	0	48	34	30	0	36	107.0	29	0	34	18	0	8	6
79.1							4	107.1							5
80.0	12	0	33	0	0	0	0	108.0	0	0	15	0	0	0	10
80.1						16	0	109.0	4	0	0	0	0	10	0
81.0	0	0	0	0	0	8	0	110.0	128	150	125	79	82	159	190
81.1						8	0	111.0	0	0	13	10	15	6	0
81.2						20	0	112.0	13	0	7	0	0	0	0
81.3						10	0	113.0	0	0	0	0	0	37	0
82.0	0	0	0	0	13	0	0	114.0	0	0	27	0	0	0	0
83.0	0	0	0	3	0	0	0	114.1		3		0	1	0	0
84.0	0	0	0	0	0	11	4	114.2		8		0	0	0	0
85.0	67	14	122	64	77	37	109	114.3							3
86.0	25	26	18	4	0	0	3	114.4							9
87.0	80	0	138	101	121	28	53	114.5							6
87.1	0	0	0	0	0	0	0	115.0	0	0	0	0	0	0	0
88.0	0	0	0	0	0	0	0	116.0	0	0	0	0	0	4	2
89.0	0	0	0	0	0	0	0	117.0	0	0	29	13	4	11	0
90.0	0	0	0	0	0	0	0	118.0	7	0	10	0	0	0	0
91.0	0	0	0	0	0	0	1	118.1							4
91.1	0			21	0	0	0	119.0	0	0	0	0	0	0	0
92.0	0	0	0	0	0	0	6	119.1						12	6
93.0	0	0	1	0	0	0	1	120.0	2	0	0	0	0	0	0
93.1					9	0	0	121.0	2	0	3	0	0	0	0

SITE	82R	83R	82	83	84	85	86	SITE	82R	83R	82	83	84	85	86
122.0	0	2	18	0	0	0	0	158.0	2	0	0	0	1	18	0
123.0	0	0	1	0	0	0	0	159.0	6	0	0	0	0	0	0
124.0	0	0	1	0	0	0	0	160.0	30	21	23	43	8	0	45
125.0	13	0	7	5	0	0	4	160.05							3
126.0	0	0	11	0	0	0	0	160.1		2		0	1	0	0
127.0	71	17	97	43	87	56	43	161.0	7	21	49	0	22	13	0
128.0	0	0	0	0	0	0	0	161.1						9	0
129.0	4	0	39	0	20	35	33	161.2						6	0
130.0	266	106	190	159	64	110	119	162.0	100	76	133	108	85	101	103
130.1							8	162.1		1		0	0	0	0
131.0	29	18	0	0	0	0	0	163.0	0	0	0	7	0	0	0
131.1		56		0	0	0	0	164.0	0	5	17	34	35	38	22
131.2		3		0	0	1	0	165.0	33	0	28	34	8	68	20
131.3					64	0	0	166.0	41	36	138	0	49	82	113
132.0	32	0	0	15	0	0	0	167.0	0	58	28	45	136	73	169
132.1							8	168.0	0	0	1	0	0	0	0
133.0	61	0	158	0	19	149	159	169.0	39	31	37	40	31	32	28
134.0	6	0	0	0	0	12	6	170.0	0	0	1	0	0	0	0
134.1						4	0	170.1							1
134.2						10	0	171.0	0	33	8	3	0	0	0
134.5							10	172.0	0	19	120	83	63	65	0
135.0	38	0	12	0	0	0	0	173.0	23	53	12	0	0	4	0
136.0	5	0	10	0	0	0	0	174.0	80	0	23	0	18	0	5
137.0	5	0	0	0	0	0	0	175.0	76	46	53	26	0	35	26
137.1				2	0	0	0	176.0	25	31	3	1	20	0	0
138.0	0	0	26	14	20	24	16	177.0	60	5	71	16	90	0	87
138.1							2	178.0	43	43	83	74	10	92	116
139.0	0	0	14	12	0	0	0	179.0	0	0	36	0	0	3	0
139.1							9	180.0	21	20	44	22	0	21	5
140.0	0	0	12	0	0	0	3	181.0	7	17	0	0	0	0	0
140.1		1		0	0	0	0	182.0	0	0	3	0	0	0	2
141.0	22	0	71	24	23	0	10	182.1						3	1
141.1		3		0	0	2	0	182.2							4
142.0	11	0	22	0	3	0	6	183.0	0	4	1	0	0	0	0
143.0	0	0	2	0	0	0	0	184.0	0	1	1	0	0	0	0
144.0	28	0	19	0	11	0	11	185.0	0	1	3	0	19	12	10
145.0	25	0	24	7	0	0	0	186.0	12	0	9	0	0	0	2
146.0	0	0	0	17	18	0	37	186.1							1
147.0	0	0	32	0	0	0	0	187.0	4	2	0	0	1	8	0
148.0	10	0	25	0	12	33	22	188.0	50	39	70	95	109	57	106
149.0	36	51	71	24	1	0	30	189.0	0	0	0	0	0	0	0
150.0	51	56	96	58	64	52	49	190.0	43	0	23	53	71	0	42
151.0	36	14	53	8	23	41	78	191.0	0	0	0	0	0	0	0
152.0	29	20	41	0	39	42	32	191.1							6
153.0	28	13	6	13	5	0	24	192.0	9	29	10	20	0	0	11
154.0	0	0	18	0	19	20	0	193.0	0	24	0	0	0	0	0
154.1					2	0	0	193.1						5	0
155.0	0	7	29	27	1	0	65	194.0	20	33	45	29	6	41	54
155.1						17	0	194.1							1
156.0	14	31	47	0	9	2	18	195.0	0	26	34	40	12	0	2
156.1	0	14	0	54	0	0	0	195.1		20		0	0	0	0
157.0	145	129	145	120	98	102	175	196.0	0	0	7	0	21	33	29
157.1							1	196.1						19	15

SITE	82R	83R	82	83	84	85	86	SITE	82R	83R	82	83	84	85	86
197.0	57	11	104	84	38	122	121	232.3							1
197.1		80		0	0	100	0	233.0	24	0	31	0	3	0	0
198.0	23	36	118	0	125	0	90	234.0	13	0	0	0	0	0	0
198.1							25	235.0	17	0	0	0	0	0	0
199.0	0	25	0	45	0	0	0	236.0	19	11	1	0	0	0	0
200.0	0	0	7	58	0	0	0	237.0	0	0	0	0	0	0	0
200.1						24	0	238.0	12	0	4	0	0	20	11
201.0	30	34	0	5	0	0	19	239.0	0	0	1	0	0	24	0
201.1						3	0	240.0	0	0	0	0	0	0	0
202.0	0	11	25	35	11	23	58	240.1		3		0	0	0	0
202.1					0	0	0	241.0	122	28	86	105	135	0	32
203.0	0	0	0	0	1	67	0	242.0	2	0	1	0	0	0	0
204.0	0	13	0	1	0	0	11	242.1		1		0	0	0	0
205.0	283	154	197	125	311	76	147	243.0	53	0	53	30	0	29	0
206.0	0	0	0	7	0	0	24	244.0	59	41	86	20	39	71	144
207.0	0	8	60	17	40	39	41	244.1					1	1	0
208.0	0	0	7	0	0	0	0	245.0	165	37	256	247	142	370	204
209.0	0	8	0	58	47	53	63	245.1							1
210.0	0	0	0	0	0	0	0	246.0	0	0	12	0	8	5	8
211.0	0	0	0	0	0	0	0	247.0	5	3	0	0	0	0	3
212.0	0	0	0	0	0	0	0	248.0	338	289	196	215	0	283	280
213.0	40	71	85	85	64	99	86	248.1					72	0	0
214.0	0	0	8	3	0	0	0	248.5							30
215.0	12	5	10	3	20	13	24	249.0	27	31	136	44	47	76	35
215.1					1	0	0	249.1						1	0
216.0	0	0	1	0	5	0	4	249.5							22
216.1							1	250.0	3	0	1	0	0	0	0
217.0	36	61	88	103	143	54	69	251.0	106	36	115	0	99	71	88
217.1					2	0	0	252.0	0	0	0	0	0	0	1
218.0	115	101	112	118	7	185	183	253.0	0	0	11	0	0	1	4
218.1		24		0	0	0	0	254.0	9	0	1	0	0	0	0
219.0	5	19	4	19	8	0	9	255.0	0	0	8	0	0	18	17
219.1						1	1	255.1					16	0	0
219.2						1	0	256.0	0	0	8	0	0	0	0
219.3						4	0	257.0	29	16	47	13	38	35	15
220.0	0	32	88	30	47	49	19	258.0	2	0	0	0	0	0	0
221.0	465	634	566	583	831	505	589	259.0	0	0	0	0	0	0	0
222.0	11	0	0	0	0	0	9	259.1							1
223.0	0	0	0	0	0	3	0	260.0	2	0	0	0	0	0	0
224.0	0	0	509	86	508	200	300	260.1							1
225.0	543	400	516	214	172	453	309	261.0	0	0	0	0	0	0	0
226.0	10	0	0	66	0	0	0	261.1		10		0	0	7	1
226.1				21	0	0	0	261.2		8		6	0	0	18
226.2				72	0	0	0	262.0	119	183	127	140	93	188	258
226.3				12	0	0	0	263.0	31	0	0	0	0	0	0
227.0	0	0	34	0	0	0	0	263.1						21	0
228.0	29	0	0	0	0	0	0	263.2						8	0
229.0	0	0	0	0	0	0	0	264.0	2	0	0	0	26	0	0
230.0	7	0	1	0	0	124	0	264.1							12
231.0	38	73	101	0	0	0	22	265.0	0	0	0	0	1	0	0
232.0	3	64	64	0	66	0	90	265.1						5	4
232.1					11	0	0	266.0	2	0	8	0	0	0	0
232.2					3	0	70	267.0	5	0	0	0	3	0	0

SITE	82R	83R	82	83	84	85	86	SITE	82R	83R	82	83	84	85	86
268.0	8	16	0	0	5	14	15	297.1		3		2	35	0	0
268.1				2	0	4	0	298.0	26	1	0	0	0	0	21
269.0	12	0	13	0	0	0	0	298.1		23		14	0	13	48
270.0	0	0	0	0	0	1	0	298.2						4	0
270.1		3		0	0	0	1	299.0	10	9	25	0	36	21	0
270.2		1		0	0	0	0	299.1					29	2	0
271.0	28	0	8	0	10	21	14	300.0	0	0	1	0	0	0	0
272.0	1	0	12	6	14	0	0	300.1							1
272.1					1	0	0	301.0	1	0	0	0	0	0	0
273.0	70	34	49	24	6	4	10	301.1							23
273.1							1	302.0	87	55	125	74	67	70	62
274.0	13	22	18	0	3	0	4	303.0	10	17	4	2	13	0	6
274.1		1		0	3	17	0	304.0	26	18	39	0	0	18	17
275.0	0	0	20	17	10	0	12	305.0	29	6	45	0	0	53	41
276.0	3	0	0	0	0	21	0	306.0	0	0	1	0	0	0	0
276.1							29	307.0	131	73	109	46	51	164	71
277.0	27	0	51	0	15	36	37	308.0	0	0	0	0	72	0	74
277.1		3		0	0	0	1	309.0	18	37	0	44	45	0	43
278.0	0	0	0	0	0	0	0	310.0	3	0	0	0	0	0	0
279.0	0	0	1	0	0	0	0	310.1						1	0
280.0	9	3	0	0	0	0	0	311.0	8	10	0	0	6	0	18
281.0	0	0	21	0	15	57	32	312.0	6	5	0	0	7	0	17
282.0	11	31	0	50	48	0	0	312.1					27	0	0
282.1						3	2	313.0	27	17	0	15	0	54	27
283.0	10	0	0	0	0	0	0	313.1							9
283.1					1	0	1	314.0	4	0	0	0	0	0	0
283.2						10	12	315.0	39	31	0	25	33	48	41
284.0	24	14	29	0	0	14	5	315.1						4	0
284.1				5	0	0	0	316.0	27	2	0	0	0	35	28
284.2					3	0	0	316.1		1		0	0	0	0
284.3					1	0	0	317.0	13	0	0	0	0	0	0
285.0	0	0	0	0	0	0	0	317.1						3	0
285.1					16	0	0	318.0	6	14	15	15	19	19	16
285.2					10	2	0	318.1							25
285.4							4	319.0	5	2	0	0	0	0	0
286.0	0	0	0	0	0	0	0	319.1						4	0
286.5							3	320.0	42	40	57	49	69	0	56
287.0	4	24	64	39	67	46	49	321.0	0	4	4	0	0	14	15
287.1		3		0	0	0	0	322.0	0	0	0	0	0	0	0
287.2							1	323.0	25	0	17	0	0	28	0
288.0	0	0	2	0	0	0	10	324.0	36	53	0	0	14	15	0
289.0	10	2	9	0	0	0	0	324.1					2	0	0
290.0	31	34	0	27	0	26	0	325.0	0	0	0	27	2	0	25
291.0	0	0	1	0	9	3	7	325.1							35
291.1					1	0	0	326.0	63	48	84	46	86	74	145
292.0	1	0	0	0	0	0	0	327.0	33	48	0	28	0	0	22
293.0	18	0	0	0	0	0	0	327.1						24	0
294.0	0	21	4	0	8	26	14	328.0	20	0	0	27	49	33	16
294.1					5	0	0	329.0	2	0	0	0	1	0	46
295.0	0	0	40	0	0	20	0	329.1							2
296.0	35	30	52	34	79	44	69	330.0	25	16	32	21	0	37	32
296.1							2	331.0	0	0	0	0	1	0	0
297.0	0	0	2	0	0	0	0	332.0	33	83	176	89	76	54	94

SITE	82R	83R	82	83	84	85	86	SITE	82R	83R	82	83	84	85	86
332.5							7	366.1				86	0	1	142
333.0	35	0	33	0	60	43	35	367.0	0	0	10	0	0	1	0
334.0	19	0	45	33	36	19	73	367.1							21
335.0	0	36	4	0	0	0	0	368.0	43	14	0	0	0	1	0
335.1						5	0	368.1						33	0
336.0	12	6	12	12	19	3	6	369.0	11	8	0	0	1	13	0
336.1		10		0	0	0	0	369.1						1	0
336.2						1	0	370.0	0	0	0	0	0	3	0
337.0	33	13	0	25	24	37	19	371.0	25	19	14	0	0	0	9
337.1		2		0	0	0	0	372.0	3	0	0	0	0	0	0
338.0	9	43	48	52	48	25	37	373.0	101	104	172	117	138	159	133
338.1						1	0	373.1		34		0	0	26	0
339.0	28	11	38	22	7	0	0	374.0	29	0	76	0	0	32	23
339.1						17	12	375.0	10	0	1	4	0	0	0
340.0	0	0	0	8	18	0	13	376.0	1	0	0	0	0	0	4
340.05							1	377.0	4	0	0	0	0	0	0
340.1					14	1	23	378.0	5	1	0	0	0	2	0
341.0	36	66	49	50	69	73	98	378.1	2	0	0	0			
342.0	29	23	32	0	0	0	0	379.0	1	2	0	0	3	0	0
342.1				7	0	25	0	380.0	15	0	0	0	0	0	0
343.0	11	31	27	0	2	24	24	380.1						4	0
343.1						20	0	380.2							2
344.0	17	19	18	15	20	22	19	381.0	32	39	46	46	16	42	0
345.0	0	0	31	0	0	0	0	381.1		282		0	410	441	0
345.05							13	381.2					81	0	0
345.1							24	381.3						15	0
346.0	0	41	0	26	18	0	0	382.0	325	192	483	423	0	0	354
347.0	0	21	0	13	0	0	0	383.0	0	492	0	457	464	426	281
348.0	0	27	0	31	28	33	0	384.0	518	1	269	7	12	5	15
349.0	44	28	51	26	24	20	16	385.0	146	117	131	96	55	148	76
349.1						7	16	386.0	0	0	0	0	9	0	0
350.0	0	20	27	18	9	25	4	386.1						1	0
351.0	2	0	0	0	0	0	0	387.0	0	0	0	0	0	0	0
352.0	85	123	183	105	107	120	138	388.0	0	0	0	0	0	0	0
352.1		1		0	0	0	29	389.0	0	0	0	0	0	0	0
352.2						20	24	390.0	0	0	21	48	57	24	55
353.0	23	11	55	22	0	39	17	390.1						14	0
354.0	0	34	30	44	29	30	46	391.0	0	0	0	0	0	0	0
355.0	0	0	9	4	2	4	0	392.0	0	0	0	0	0	0	10
355.1						4	0	393.0	20	0	0	21	0	40	22
356.0	46	0	67	0	0	0	0	394.0	0	22	0	0	0	7	3
356.1					100	40	92	395.0	0	10	0	32	21	23	20
357.0	0	0	0	0	0	14	0	395.1							1
358.0	25	0	13	0	0	0	0	396.0	0	0	0	0	4	11	8
359.0	5	0	0	0	0	14	4	396.1						16	0
359.1						1	0	397.0	0	0	2	12	8	7	9
360.0	58	0	0	0	0	0	44	398.1							0
361.0	97	186	0	0	0	0	0	398.0	0	2	0	0	0	43	6
362.0	21	78	9	0	0	0	0	399.0	10	9	15	46	49	67	24
363.0	354	279	583	333	784	460	401	400.0	0	58	0	0	0	0	53
364.0	0	12	13	0	1	0	0	401.0	0	0	0	0	3	6	1
365.0	0	0	52	0	0	0	0	402.0	0	0	0	0	0	0	0
366.0	0	240	16	0	0	40	0	403.0	0	0	0	0	0	3	0

SITE	82R	83R	82	83	84	85	86
404.0	0	0	0	79	28	13	3
405.0	56	8	0	7	9	14	13
405.1							1
406.0	0	0	0	0	0	0	0
407.0	0	0	0	0	0	0	0
407.1							13
408.0	0	0	0	0	0	0	1
409.0	0	0	0	0	0	20	61
410.0	0	0	48	0	10	28	30
411.0	0	0	0	0	0	0	0
412.0	0	0	35	0	0	0	6
413.0	66	24	52	33	5	96	72
413.1		1		0	0	0	0
414.0	263	215	0	363	328	379	516
415.0	63	0	0	0	0	0	2
416.0	0	0	0	0	0	8	0
417.0	0	0	0	0	0	0	1
418.0	208	109	129	542	139	328	266
419.0	0		0	0	0	1	0
420.0	0		0	0	9	10	23
421.0	0	0	0	0	0	0	0
422.0	51	69	50	56	41	32	42

	82R	83R	82	83	84	85	86
TOTALS	10,669	9,298	13,026	10,752	10,885	12,530	13,913

APPENDIX III. Harbor seal hauling sites with site descriptions as available. (SITE= site number; LOCATION= name of site; COUNTY= county of site; LAT/LONG= exact location of site; SUBST= primary type of substrate [1= extended reef, 2= offshore rock, 3= onshore rock, 4= harbor or estuary, 5= ocean sandy beach, 6= river log, 7= floats, 8= night haul out, 9= ocean rocky beach]; Subs2= secondary type of substrate; MAX= maximum number counted at site; ?= some question as to location; blanks indicate data not available).

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
000.1	?km N. Pt. Loma	SD	32 .	117 .	2		7
001.0	1.2km S. Pt. La Jolla	SD	3250.56	11716.90	1		0
002.0	0.6km S. Pt. La Jolla	SD	3250.87	11716.68	1		12
003.0	0.5km S. Pt. La Jolla	SD	3250.90	11716.62	2		24
004.0	Mugu Lagoon	V	3406.11	11904.17	4		99
005.0	.1km E. Oil P. Carpinteria	SB	3423.11	11930.33	5	3	116
006.0	.3km W. Oil P. Carpinteria	SB	3423.13	11930.47	2		3
007.0	Carpinteria St. Beach	SB	3423.36	11931.09	1	2	53
008.0	Sand Pt. (minus tide only)	SB	3423.60	11932.30	2		10
009.0	Moore Mesa 2km E. Goleta R.	SB	3425.31	11948.39	2		70
010.0	1.2km W. Ellwood Oil Pier	SB	3426.38	11956.24	5		205
010.1	N. Ellwood	SB	3427.38	12028.03	2		1
011.0	0.8km E. Pt. Conception	SB	3427.05	12027.40	5	1	554
012.0	N. Pt. Conception	SB	3427.38	12028.03	2		38
013.0	N. Pt. Conception	SB	3429.	12028.	1		19
013.1	1km S. Sudden	SB	3432.	12034.	2		2
014.0	Sudden	SB	3432.	12034.	3		13
014.1	Sudden/Rocky Pt.	SB	3433.35	12036.48			31
014.4	?km S. Rocky Pt.	SB	3433.47	12037.30	5	9	290
014.6	Near Rocky Pt.	SB					140
014.8	Near Rocky Pt.	SB					70
015.0	1.0 Km S. Rocky Pt.	SB	3433.	12037.	3		247
015.1	0.5 km S. of Rocky Pt.	SB	3433.	12037.	3		228
015.2	? km S Rocky Pt.	SB	3433.	12037.	1		119
016.0	1.0 Km S. Rocky Pt.	SB	3433.75	12037.61	3	1	107
017.0	S. Pt. Arguello	SB	3434.	12038.	1		57
018.0	S. Purisima Pt.	SB	3444.	12037.	3		127
019.0	S. Purisima Pt.	SB	3444.40	12037.24	1		100
020.0	Purisima Pt.	SB	3445.35	12037	1		43
021.0	Pt. Sal Area	SB	3452.05	12036.82	3		6
021.1	Pt. Sal Area	SB	3554.	12040.	3		10
021.2	Pt Sal Area	SB	3554.	12040.	3		26
021.3	Pt. Sal Area	SB	3554.	120 .	1		2
022.0	N. Pt. Sal	SB	3454.36	12039.97	3		67
023.0	Mussel Pt.	SB	3455.76	12040.04	1		1
023.1	?km N. Pismo Beach Pier	SLO	3508.	1238.	3		34

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
024.0	1.7kmN. Pismo Beach P.	SLO	3508.	12038.	2		58
025.0	Shell Beach (O.R. N. Br. Is.)	SLO	3509.17	12039.81	2		138
026.0	.1kmN. of site #25-O.R.at lt.	SLO	3509.15	12040.	1		51
026.1	E. Mallagh Landing	SLO	3110.	12042.	1	3	22
027.0	Pirates Cove(Mallagh Landing)	SLO	3511.07	12042.86	2		29
028.0	Fossil Pt.	SLO	3510.	12043.	2		20
029.0	0.8km S. Pecho Rock	SLO	3510.	12049.	1		2
030.0	Pecho Rock	SLO	3510.75	12048.95	2		2
031.0	Deer Canyon (Outside S)	SLO	3511.26	12048.73	1		67
031.1	Vic. Deer Canyon	SLO	3510.74	12046.06	1		12
032.0	Deer Canyon (Inside Cove)	SLO	3511.29	12048.74	1		4
033.0	0.9km N. Deer Canyon	SLO	3511.55	12049.25	1		14
033.1	0.95km N. Deer Canyon	SLO	3511.55	12049.27	3		16
033.2	? km N. Deer Canyon	SLO	3511.	12049.	1		28
034.0	1.0km N. Deer Canyon	SLO	3511.56	12049.28	3		20
034.1	1.1?km N. Deer Canyon	SLO	3511.	12049.	2		38
035.0	1.2km N. Deer Canyon	SLO	3511.65	12049.44	2		58
035.1	1.3km N. Deer Canyon	SLO	3511.68	12049.50	1	3	3
036.0	1.5km N. Deer Canyon	SLO	3511.73	12049.60	1		32
037.0	2.0km N. Deer Canyon	SLO	3511.79	12049.92	1		61
038.0	2.1km N. Deer Canyon	SLO	3511.80	12049.99	1		9
039.0	2.4km N. Deer Canyon	SLO	3511.88	12050.18	1	2	146
039.1	N. China Shack	SLO					9
040.0	0.4km S. Diablo Cyn Har.	SLO	3512.	12052.			126
040.1	? Km N. Diablo Nuclear Fac.	SLO	3512.	12052.	2		1
041.0	0.6km N. Lion Rock	SLO	3513.42	12052.16	2		57
041.1	?km N. Lion Rock	SLO	3513.	12052.	5		49
041.2	?km N. Lion Rock	SLO			1		14
042.0	1.8km N. Lion Rock (opp.Res.)	SLO	3513.94	12052.66	1		36
042.1	?km N. Lion Rock	SLO	3513.	12052.	3	1	16
043.0	2.3km N. Lion Rock	SLO	3514.15	12053.04	2		21
043.1	1.0km N. Pt. Buchon	SLO	35 .	12053.	5		2
044.0	0.8km S. Islay Creek	SLO	3516.	12053.	2		24
045.0	0.5km S. Hazard Cyn.	SLO	3517.34	12053.82	1		22
046.0	Morro Bay (Inside Harbor)	SLO	3520.39	12050.59	4		41
046.1	? Km N. Whale Rock	SLO	3520.30	12051.10	2		1
047.0	0.2km W. Cayucos Pier	SLO	3526.91	12054.44	2		13
048.0	1.0km W. Cayucos Pier	SLO	3526.84	12054.59	1		22
049.0	1.3km W. Cayucos Pier	SLO	3526.87	12055.27	1	2	95
050.0	0.1km W. Black Rock	SLO	3526.78	12055.41	2		86
051.0	0.9km E. Cayucos Pt.	SLO	3526.81	12055.80	1		15
052.0	0.2km E. Cayucos Pt.	SLO	3526.79	12056.22	1		100
053.0	Cayucos Pt.	SLO	3526.76	12056.37	1		197
054.0	0.2km W. Cayucos Pt.	SLO	3526.77	12056.47	1		65
055.0	0.4km W. Cayucos Pt.	SLO	3526.76	12056.66	1		101
055.1	? km W. Cayucos Pt.	SLO	3526.	12056.	1		30
055.2	? km W. Cayucos Pt.	SLO			1	2	12
056.0	2.1km NW Cayucos Pt.	SLO	3527.76	12057.66	1		50
056.1	?km NW Cayucos Pt.	SLO	3527.	12057.	1	3	39

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
056.2	?km NW Cayucos Pt.	SLO	3527.	12057.	1		7
057.0	0.4km SE Villa Creek	SLO	3527.	12058.	1		46
057.1	? km W. Villa Cr.	SLO	3527.	12000.	1		30
057.2	? Km W. Villa Cr.	SLO	3527.	12000.	3		14
058.0	Pt. Estero	SLO	3527.	12000.	1		67
058.1	Pt. Estero area	SLO	35 .	12 .	1	3	51
059.0	0.4km S. China Shack	SLO	3528.80	12101.35	1		8
060.0	0.3km S. China Shack	SLO	3528.87	12101.39	1		11
061.0	0.1km S. China Shack	SLO	3528.94	12101.42	2		12
062.0	0.1km N. China Shack	SLO	3529.06	12101.44	1	2	17
063.0	0.4km N. China Shack	SLO	3529.06	12101.58	1		19
064.0	0.5km N. China Shack	SLO	3529.08	12101.65	1		27
065.0	0.7km N. China Shack	SLO	3529.18	12101.71	1		43
065.1	? km n. China Shack	SLO	3529.	12103	1		1
065.2	? km N. China Shack	SLO	35 .	121 .	2		28
066.0	1.9km S. Radar Station	SLO	3530.33	12103.05	1	2	51
066.1	?km S. Radar Station	SLO	3530.	12103.	3	1	45
066.2	?km S. Radar Station	SLO	3530.	12103.			1
067.0	0.4km S. Radar Station	SLO	3530.89	12103.82	2		26
068.0	1.2km N. Radar Station	SLO	3531.	12104.	1		15
068.1	Vicinity White Rk.	SLO	3531.	12104.	1		15
068.2	Vicinity White Rk.	SLO			1		13
068.3	S. Vicinity White Rk.	SLO			2		1
069.0	Castle Inn,Cambria-Opp.C.Rock	SLO	3534.28	12106.71	2		15
069.1	?	SLO	35 .	121 .	2		15
070.0	0.9km N. San Simeon Cr.	SLO	3536.04	12108.03	1		28
070.1	?km N. San Simeon Cr.	SLO	3536.	12108.	1		8
071.0	1.3km N. San Simeon Cr.	SLO	3536.11	12108.26	1		87
071.1	?	SLO	35 .	121 .	2		2
072.0	1.6km N. San Simeon Cr.	SLO	3536.22	12108.43	1		68
073.0	1.8km N. San Simeon Cr.	SLO	3536.29	12108.58	1		13
073.1	Pico Creek Cove	SLO	3537.04	12109.01	2		22
074.0	.6km E. San Simeon Pier	SLO	3538.47	12110.80	2		68
074.1	W. San Simeon Pt.	SLO			1		2
075.0	1.3km W. San Simeon Pt.	SLO	3538.44	12112.30	1	2	23
075.1	?	SLO					2
076.0	.4km W. Adobe Creek	SLO	3539.15	12113.16	1	2	90
076.1	?km W. Adobe Creek	SLO	3539.	121 .	2		40
077.0	1.6km W. Adobe Creek	SLO	3539.	12114.	1		17
077.1	?km W. Adobe Creek	SLO	35 .	121 .	1	3	4
078.0	1.8km W. Adobe Creek	SLO	3539.00	12114.53	2	1	104
079.0	2.0km W. Adobe Creek	SLO	3539.19	12114.66	1	2	64
079.1	E. Piedra Blancas Lthse	SLO			2		4
080.0	2.7km E Piedra Blancas Lthse	SLO	3539.57	12115.23	1		33
080.1	? km E. Piedras Blancas	SLO	3539.	12115.	1		16
081.0	2.3km E Piedra Blancas Lthse	SLO	3539.75	12115.48	2		18
081.1	? km E. Piedras Blancas	SLO	3539.	12115.	1		8
081.2	? km E. Piedras Blancas	SLO	3539.	12115.	1		20
081.3	? km E. Piedras Blancas	SLO	3539.	12115.	1		10

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
082.0	Offshore Pt. Piedras Blancas	SLO	3539.76	12116.62	2		70
083.0	Beach at Pt. Piedras Blancas	SLO	3539.86	12116.56	1		58
084.0	Harleck Castle Rock Area	SLO	3541.99	12117.74	1		11
085.0	La Cruz Rock	SLO	3542.40	12118.68	2		122
086.0	0.3km S. Pt. Sierra Nevada	SLO	3542.68	12118.82	2		68
087.0	0.9km S. Breaker Pt.	SLO	3544.15	12119.07	2	1	138
087.1	N. Breaker Pt.	SLO	3544.15	12119.07	1		0
088.0	N. Ragged Pt.	SLO	3546.	12119.			5
089.0	N. Ragged Pt.	SLO	3547.	12120.			20
090.0	1.0km S. Salmon Creek	M	3548.	12121.			15
091.0	1.6km S. Salmon Creek	M	3548.30	12121.49	1		1
091.1	Salmon Creek area	M	3548.	12121.	2		21
092.0	0.3km S. Salmon Creek	M	3548.36	12121.59	2		12
093.0	0.5km N. Salmon Creek	M	3548.65	12122.10	2		1
093.1	?km S. Redwood Gulch	M	35 .	121 .	2		9
094.0	Redwood Gulch	M	3550.02	12123.74	2		2
094.1	Vicinity Redwood Gulch	M	3550.	12123.	2		10
094.2	Vicinity Redwood Gulch	M	3550.	12123.	2		4
094.3	?km SE Alder Creek	M	3551.	12124.	2		1
094.4	S. Alder Creek	M			2		6
094.5	S. Alder Creek	M					1
095.0	0.3km S. Alder Creek	M	3551.37	12124.86	2		15
096.0	0.8km N. Alder Creek	M	3551.49	12125.01	2		1
096.1	?km N. Alder Creek	M	3551.	12125.	2		14
096.2	?km N. Alder Creek	M	3551.	12125.	2		2
096.3	?km N. Alder Creek	M	3551.	12125.	2		1
096.4	?km N. Alder Creek	M	3551.	12125.	2		3
097.0	1.3km N. Alder Creek	M	3551.80	12125.81	2		22
098.0	Bird Rock (Gorda Rock)	M	3552.54	12127.15	2		59
099.0	0.6km S. Cape San Martin	M	3553.08	12127.59	5		5
099.1	Vicinity Cape San Martin	M	3553.	12127.	2		7
099.2	Vicinity Cape San Martin	M	3553.	12127.	2		3
100.0	1.5km S. Plaskett Rock	M	3554.56	12128.03	2		9
101.0	0.7km S. Prewitt Creek	M	3555.75	12128.39	2		14
102.0	0.4km S. Prewitt Creek	M	3555.91	12128.58	2		44
102.1	S. Prewitt Creek	M			2		2
103.0	0.7km N. Prewitt Creek	M	3556.47	12128.64	2		1
104.0	0.1km S. Wild Cattle Cr.	M	3557.43	12129.02	2		7
104.1	?S. Wild Cattle Cr.	M			2		3
104.2	?E. Wild Cattle Cr.	M			2		1
104.3	?N. Wild Cattle Cr.	M			2		1
105.0	1.0km E. Lopez Point	M	3601.17	12133.31	2		6
105.1	E. Lopez Point	M			2		5
106.0	0.1km E. Lopez Point	M	3601.15	12133.96	2		1
106.1		M			2		1
107.0	0.1km W. Lopez Point	M	3601.19	12134.03	1		34
107.1		M			2		5
108.0	0.7km S. Vicente Creek	M	3602.30	12134.84	2		15
109.0	Vicente Creek	M	3602.68	12135.10	2		10

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
110.0	.6km N. Big Creek	M	3604.35	12136.35	5	2	201
111.0	1.0km S. Dolan Rock	M	3604.66	12136.62	2		15
112.0	0.6km S. Dolan Rock	M	3604.	12137.	2		13
113.0	Dolan Rock	M	3605.	12137.	2		37
114.0	0.2km N. Rat Creek	M	3605.61	12137.23	2		71
114.1	Rat Creek Area	M	36 .	121 .	2		3
114.2	?km N. Rat Creek	M	3605.	12137.	3		8
114.3	?km N. Rat Creek	M			2		3
114.4	S. Lime Creek	M			2		9
114.5	Lime Creek	M			2		6
115.0	0.3km S. Lime Creek	M	3607.10	12137.94	2		46
116.0	0.4km S. Anderson Canyon	M	3608.97	12139.70	2		4
117.0	N. Anderson Canyon	M	3609.	12140.	2		29
118.0	0.1km S. McWay Rocks	M	3609.80	12140.62	2		13
118.1	S. McWay Rocks	M			2		4
119.0	McWay Rocks	M	3609.80	12140.67	2		3
119.1	Vicinity Mcway Rks.	M	3609.	12140.	1		12
120.0	0.3km N. McWay Rocks	M	3609.95	12140.77	2		2
121.0	1.2km S. Partington	M	3610.09	12141.17	2		3
122.0	0.6km S. Partington Creek	M	3610.25	12141.57	2		18
123.0	0.8km S. Torre Canyon	M	3611.24	12142.46	2		1
124.0	La Fler Canyon	M	3611.98	12143.70	2		1
125.0	0.1km N. La Fler Canyon	M	3612.00	12143.74	2		13
126.0	0.8km N. La Fler Canyon	M	3612.	12144.	3		11
127.0	2.7km S. Pfeiffer Point	M	3613.27	12146.4	1	2	97
128.0	Cooper Point	M	3614.	12150.	2		1
129.0	2.4km N. Cooper Point	M	3616.13	12150.69	2		42
130.0	1.7km N. Big Sur River	M	3617.30	12152.47	1	2	266
130.1	1km S. Pt. Sur Lthouse	M			1		8
131.0	1.6km S. Pt. Sur Lthouse	M	3617.97	12153.05	2		29
131.1	1.0km S. Pt. Sur Lthouse	M	3617.	12153.	1		56
131.2	1.0km S. Pt. Sur Lthouse	M	3617.	12153.	2		3
131.3	?km S. Pt. Sur Lighthouse	M	36 .	121 .	2		64
132.0	1.2km S. Pt. Big Sur Lthouse	M	3618.13	12153.26	1		32
132.1	S. Pt. Big Sur Lthouse	M			1		8
133.0	1.1km S. Pt. Big Sur Lthouse	M	3618.17	12153.35	2		159
134.0	? km S. Hurricane Pt.	M	3621.10	12154.09	1	3	12
134.1	? km S Hurricane Pt.	M	3621.	12154.	2		4
134.2	? km S Hurricane Pt.	M	3621.	12154.	2		10
134.5	S Hurricane Pt.	M			3		10
135.0	Castle Rk. (Bixby Ldg.)	M	3622.44	12154.35	5		38
136.0	0.5km N. Palo Colorado Canyon	M	3623.99	12154.55	2		10
137.0	0.8km S. Soberanes Point	M	3626.59	12155.43	2		5
137.1	Soberanes Pt. Area	M	36 .	121 .	1		2
138.0	Near Soberanes Point	M	3626.59	12155.43	2		26
138.1		M	3627.	12155.	2		2
139.0	0.9km S. Malpaso Creek	M	3628.40	12156.20	2		14
139.1	S. Malpaso Creek	M			3		9
140.0	Yankee Point Cove	M	3629.27	12156.52	2		19

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
140.1	Yankee Point	M	3629.	12156.	1		1
141.0	Yankee Point	M	3629.41	12156.65	3		71
141.1	Yankee Point	M	3629.	12156.	3		3
142.0	Bird Island (Pelican Point)	M	3630.40	12156.63	2		31
143.0	0.3km N. Bird Island	M	36 .	121 .	2		2
144.0	Headland Cove	M	3631.17	12157.01	3		28
145.0	Whalers Cove	M	3631.20	12156.14	2	1	25
146.0	The Pit, Whalers Cove	M	3631.30	12156.13	2		37
147.0	Moss Cove (Pt. Lobos Reserve)	M	3631.35	12156.04	2		48
148.0	Arrowhead Point (Outside)	M	3633.65	12156.35	1		36
149.0	Arrowhead Point (Inside)	M	3633.73	12156.35	1		71
150.0	Pescadero Rocks	M	3633.70	12156.62	2		96
151.0	.5kmN.Pescadero Pt.Stwtr.Cove	M	3633.92	12156.97	3	2	78
152.0	Cypress Pt. Parking Lot South	M	3634.58	12158.36	1	2	42
153.0	0.1km S. Cypress Point	M	3634.75	12158.60	2		93
154.0	Cypress Point	M	3634.82	12158.62	1		58
154.1	Cypress Point	M	3634.	12158.	3		2
155.0	0.1km N. Cypress Point	M	3634.83	12158.52	1		65
155.1	?km N Cypress Point	M	3634.	12158.	2		17
156.0	0.4km N. Cypress Point	M	3634.94	12158.48	2	3	63
156.1	Near Fan Shell Beach	M	3635.	12157.	1		54
157.0	Seal Rock	M	3635.30	12157.90	2	1	175
157.1	N. Seal Rock	M			2		1
158.0	1.3km N. Seal Rock(Ocean Av.)	M	3635.97	12157.76	1	2	18
159.0	0.2km S. Point Joe	M	3636.54	12157.48	1		6
160.0	Asilomar (Arena Av.)	M	3637.60	12156.47	1	2	45
160.05	S. Asilomar (Arena Av.)	M			2		3
160.1	Asilomar (Arena Ave)	M	3637.	12156.	1		9
161.0	.5km W Lovers Pt.Pacific Av.	M	3637.70	12155.17	2	1	49
161.1	?km SE Lovers Pt.	M	3637.	12155.	2		9
161.2	?km SE Lovers Pt.	M	3637.	12155.	2		6
162.0	Hopkins Marine Station	M	3637.28	12154.14	1	2	149
162.1	Cannery Row Rock	M	3637.	12154.	2		1
163.0	Monterey Harbor(2km S Brwtr.)	M	3636.42	12153.60	2		7
164.0	Elkhorn Slough(1.6km E. Hwy1)	M	3648.81	12146.1	4		38
165.0	Soquel Pt.	SC	3657.20	12158.6	2		68
166.0	2.0km N. Terrance Pt.	SC	3657.04	12205.3	3		138
167.0	Table Rock	SC	3657.80	12208.	1	3	169
168.0	1.2km N. Yellow Bank Creek	SC	3659.	12210.	2		29
169.0	Davenport Cement Plant	SC	3700.52	12212.26	3	1	40
170.0	El Jarro Pt.	SC	3701.	12213.	1		1
170.1		SC	3701.24	12213	3		1
171.0	N. Scott Creek	SC	3703.	12214.	1		33
172.0	2.6km S. Greyhound Rock	SC	3703.50	12215.03	2	1	120
173.0	1.7km S. Greyhound Rock	SC	3703.93	12215.27	1		53
174.0	1.3km S. Greyhound Rock	SC	3704.04	12215.42	3		80
175.0	1.0km N. Greyhound Rock	SC	3705.12	12216.26	2		81
176.0	Ano Nuevo Pt.	SM	3706.76	12219.75	1		31
177.0	Ano Nuevo Isl.	SM	3706.55	12220.15	2	5	90

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
178.0	0.7km N. Ano Nuevo Pt.	SM	3706.98	12220.12	1		116
179.0	1.1km N. Ano Nuevo Pt.	SM	3707.11	12220.29	1		36
180.0	1.3km N. Ano Nuevo Pt.	SM	3707.22	12220.32	2		44
181.0	1.8km S. Franklin Pt.	SM	3708.35	12220.71	2		17
182.0	Franklin Pt.	SM	3708.	12221.	2		3
182.1	Vicinity Franklin Pt.	SM	3708.	12221.	1		3
182.2	S. Vicinity Franklin Pt.	SM			2		4
183.0	3.4km N. Franklin Pt.	SM	3710.66	12222.45	1		4
184.0	1.4km S. Pigeon Pt.	SM	3710.81	12222.66	2		1
185.0	0.4km S. Pigeon Pt.	SM	3710.93	12223.31	2		19
186.0	1.4km N. Pigeon Pt.	SM	3711.60	12224.01	1	2	12
186.1		SM			2		1
187.0	1.7km N. Pigeon Pt.	SM	3711.67	12224.16	2		8
188.0	1.7km S. Bean Hollow	SM	3712.62	12224.43	1		109
189.0	0.5km N. Bean Hollow	SM	3713.74	12224.75	2		11
190.0	0.8km N. Bean Hollow	SM	3713.90	12224.85	1	2	71
191.0	1.0km N. Bean Hollow	SM	3713.98	12224.94	2		21
191.1	Pescadero Pt.	SM			1		6
192.0	0.2km N. Pescadero Pt.	SM	3714.56	12225.11	2		34
193.0	0.3km N. Pescadero Pt.	SM	3714.66	12225.11	2		24
193.1	?km N Pescadero Pt.	SM	3714.	12225.	1		5
194.0	Butano Creek Mouth	SM	3716.01	12224.84	2		54
194.1	?km N. Martins Beach	SM					1
195.0	Eel Rock	SM	3724.48	12225.66	2		40
195.1	Eel Rock	SM	3724.	12225.	1		20
196.0	Miramontes Pt.	SM	3726.48	12226.66	2		33
196.1	?km N. Miramontes Pt.	SM	3725.95	12226.	2		19
197.0	Sail Rock, Pillar Pt.	SM	3729.49	12229.98	2		122
197.1	Sail Rock, Pillar Pt.	SM	3729.	12229.	1		100
198.0	1.0km N. Pillar Pt.	SM	3730.29	12230.21	2		125
198.1		SM			2		25
199.0	1.5km N. Pillar Pt.	SM	3730.46	12230.56	1		45
200.0	Moss Beach (Seal Cove)	SM	3730.54	12230.83	1		58
200.1	?km S. Seal Cove	SM	3730.	12230.	2		24
201.0	Moss Beach (N. Seal Cove)	SM	3730.61	12230.83	2		34
201.1	?km S. Pt. San Pedro	SM	3735.	12231.	2		3
202.0	San Pedro Rock (South Side)	SM	3735.70	12231.34	3		58
202.1	Mussel Rock	SM	3740.	12230.	2		0
203.0	Gaudalupe Slough	SCL	3726.70	12202.14	4		67
204.0	Calaveras Pt.	ALA	3728.02	12202.99	4		14
205.0	Mowry Slough	ALA	3729.32	12201.98	4		327
206.0	Plummer Creek	ALA	3730.48	12205.2	4		24
207.0	Greco Island	SM	3731.05	12210.78	4		65
208.0	Corkscrew Slough	SM	3738.79	12212.88	4		17
209.0	Yerba Buena Island	SF	3748.37	12221.8	2	3	63
210.0	0.4km W. Blunt Pt.,Angel Isl.	MAR	3751.27	12225.23	2		1
211.0	Sausalito Small Craft Harbor	MAR	3752.30	12229.69	7		30
212.0	Strawberry Spit	MAR	3753.27	12229.89	1		97
213.0	Castro Rocks	CC	3756.03	12225.2	2	4	99

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
214.0	Tubbs Island	SON	3807.	12226.	4		8
215.0	Pt. Bonito(.6km N. on inside)	MAR	3749.33	12231.59	2		34
215.1	Pt. Bonita	MAR	3749.33	12231.	2		1
216.0	0.4km N. Tennessee Cove	MAR	3750.63	12233.	2		5
216.1	Muir Beach	MAR					1
217.0	Bolinas Lagoon	MAR	3754.82	12240.2	4		143
217.1	Bolinas Lagoon	MAR	37 .	122 .	5		2
218.0	Duxbury Reef	MAR	3753.29	12241.77	1	2	185
218.1	West end Duxberry Reef	MAR	3753.	12241.	1		24
219.0	Bolinas Pt.	MAR	3754.14	12243.4	1		19
219.1	Vicinity Bolinas Pt.	MAR	3754.74	12243.75	1		1
219.2	Vicinity Bolinas Pt.	MAR	3754.	12243.	1		1
219.3	Vicinity Bolinas Pt.	MAR	3754	12243.	1		4
220.0	Rocks at S. Edge Double Pt.	MAR	3756.58	12246.54	1	3	93
221.0	Double Pt. Beach	MAR	3756.50	12246.6	5	2	831
222.0	Beach .4km N. Double Pt.	MAR	3756.90	12247.0	5		11
223.0	Millers Pt.	MAR	3759.08	12248.64	2		3
224.0	Limantour	MAR	3801.89	12255.34	4		509
225.0	Drakes Estero	MAR	3802.00	12255.78	4		726
226.0	1.7km W. Chimney Rock	MAR	3759.51	12258.83	2		66
226.1	?km W. Chimney Rock	MAR	3759.	12258.	5		21
226.2	?km W. Chimney Rock	MAR	3759.	12258.	2		72
226.3	?km W. Chimney Rock	MAR	3759.	12258.	2		12
227.0	1.8km W. Chimney Rock	MAR	3759.55	12259.03	2		34
228.0	1.9km W. Chimney Rock	MAR	3759.50	12259.07	2		29
229.0	2.1km W. Chimney Rock	MAR	3759.57	12259.17	2		0
230.0	2.5km W. Chimney Rock	MAR	3759.61	12259.51	2		124
231.0	2.7km W. Chimney Rock	MAR	3759.55	12259.57	5		101
232.0	3.6km W. Chimney Rock	MAR	3759.58	12300.22	5	2	90
232.1	?km W. Chimney Rock	MAR	3759.	12300.	5		11
232.2	?km W. Chimney Rock	MAR	3759.	12300.	5	2	70
232.3	?km W. Chimney Rock	MAR			5		1
233.0	3.7km W. Chimney Rock	MAR	3759.01	12300.31	1	5	31
234.0	4.2km W.Chimney Rock-S.Lion C	MAR	3759.70	12300.58	2		13
235.0	4.3km W.Chimney Rock-S.Lion C	MAR	3759.70	12300.67	2		17
236.0	1.4km S. Elephant Rock	MAR	3810.23	12257.22	1		19
237.0	0.6km S. Elephant Rock	MAR	3810.69	12257.50	1		1
238.0	0.2km E. Elephant Rock	MAR	3810.80	12257.80	2		20
239.0	N. End Driftwood Beach	MAR	3812.18	12258.12	2		24
240.0	3.2km S. Bird Island	MAR	3813.30	12258.29	2		0
240.1	?km S. Bird Island	MAR	3818.	12258.			3
241.0	2.9km S. Bird Island	MAR	3812.50	12258.42	5	1	135
242.0	1.7km S. Bird Island	MAR	3813.05	12258.88	2		2
242.1	Bird Island	MAR	3813.	12258.			1
243.0	0.7km SE Bird Island	MAR	3813.55	12259.18	5	1	53
244.0	0.6km SE Bird Island	MAR	3813.67	12259.20	1	5	144
244.1	?km SE Bird Island	MAR	3813.	12259.	2		1
245.0	Bird Island	MAR	3813.77	12259.57	2	5	419
245.1	SW Tomales Bluff	MAR			3		1

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
246.0	0.6km S. Tomales Bluff	MAR	3814.12	12259.56	3		12
247.0	Tomales Bluff	MAR	3814.47	12259.61	2		5
248.0	.5km N. Toms Pt.	MAR	3813.00	12257.26	4		338
248.1	Tomales Bay	MAR	38 .	122 .	4		72
248.5	E. Lower Pierce Ranch	MAR			5		30
249.0	Hog Island (E. Spit)	MAR	3811.90	12255.88	4		236
249.1	?km S. Pinnicle Rk.	MAR	3818.	12301.	2		1
249.5		MAR	3817.49	12259.2	2		22
250.0	Pinnacle Rock Area	MAR	3818.	12301.	2		3
251.0	Bodega Rock	SON	3817.75	12302.82	2		115
252.0	New Bodega Head	SON	3817.89	12303.11	1		11
253.0	Mussel Pt.	SON	3819.32	12304.63	1		11
254.0	Arched Rock S. Carmet	SON	3822.20	12304.40	1		9
255.0	0.7km S. Duncans Pt.	SON	3823.47	12305.21	2		18
255.1	Duncans Pt.	SON	3823.	123 .	2		16
256.0	0.3km E. Duncans Pt.(Cove)	SON	3823.65	12306.46	2		8
257.0	Wrights Beach	SON	3824.27	12306.01	2		47
258.0	Furlong Gulch Area	SON	3824.	12306.	2		2
259.0	0.9km N. Shell Beach	SON	3825.28	12306.84	2		1
259.1	N. Shell Beach	SON			2		1
260.0	1.2km N. Shell Beach	SON	3825.39	12306.90	2		2
260.1		SON			2		1
261.0	Penny Island Russian River	SON	3826.75	12306.83	6		3
261.1	Russian River	SON	3826.	12306.	6		10
261.2	Russian River	SON	3826.	12306.	6		18
262.0	Russian River Spits	SON	3827.02	12307.64	4		258
263.0	1.3km N. Russian River	SON	3827.34	12308.51	2		31
263.1	?km N. Russian River	SON	3827.	12308.	2		21
263.2	?km N. Russian River	SON	3827.	12308.	2		8
264.0	1.6km N. Russian River	SON	3837.39	12308.67	2	3	26
264.1	?km N. Russian River	SON	3827.32	12308.	2		12
265.0	2.0km N. Russian River	SON	3827.61	12308.90	2		10
265.1	?km N. Russian River	SON	3828.39	12310.	2		5
266.0	1.6km N. Russian Gulch	SON	3827.60	12310.18	2		13
267.0	1.7km N. Russian Gulch	SON	3828.59	12310.26	2		5
268.0	1.9km N. Russian Gulch	SON	3828.63	12310.32	1	2	16
268.1	?km N. Russian Gulch	SON	3828.	12310.	2		4
269.0	0.3km S. Meyer Gulch	SON	3828.96	12310.87	2		13
270.0	1.8km S.Fort Ross Reef	SON	3929.75	12312.46	2		9
270.1	?km S. Fort Ross Reef	SON	3929.	12312.	2		3
270.2	?km S. Fort Ross Reef	SON	3929.	12312.	2		1
271.0	0.3km S. Fort Ross Gulch	SON	3830.10	12313.59	2		28
272.0	Fort Ross Reef	SON	3830.06	12313.92			14
272.1	?km N. Fort Ross Reef	SON	3830.	12313.			1
273.0	0.2km N. Fort Ross Reef	SON	3830.23	12313.85	2		70
273.1	N. Fort Ross Reef	SON			2		1
274.0	Fort Ross Cove	SON	3830.68	12314.63	2		22
274.1	N. Side Fort Ross Cove	SON	3830.	12314.	2	3	17
275.0	Northwest Cape (0.1km S.)	SON	3830.70	12315.17	2		20

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
276.0	Northwest Cape	SON	3830.72	12315.27	2		21
276.1	N. Northwest Cape	SON			2		29
277.0	0.3km N. Northwest Cape	SON	3831.87	12315.22	3		51
277.1	?km N. Northwest Cape	SON	3831.	12315.	2		3
278.0	0.9km N. Northwest Cape	SON	3831.12	12315.54	1		0
279.0	0.2km S. Windermere Pt.	SON	3831.42	12316.01	1		1
280.0	1.0km N. Windermere Pt.	SON	3831.55	12316.09	2		9
281.0	0.5km N. Timber Cove Gr.	SON	3831.84	12316.5	2		57
282.0	0.9km N. Timber Cove Gr.	SON	3832.15	12316.91			50
282.1	South End Stillwater Cove	SON	3832.	12317.	2		3
283.0	Stillwater Cove (inside)	SON	3832.78	12317.96	2		10
283.1	?km N. Stillwater Cove	SON	3832.	12317.	2		1
283.2	Gerstle Cove	SON	3833.	12319.	2		12
284.0	Salt Pt.	SON	3833.90	12319.98	2		29
284.1	Salt Pt. Area	SON	3833.	12319.	2		5
284.2	Salt Pt. Area	SON	38 .	12 .			3
284.3	Salt Pt. Area	SON	38 .	12 .			1
285.0	0.3km N. Salt Pt.	SON	3834.	12320.	2		57
285.1	Salt Pt. Area	SON	3834.	123 .	2		16
285.2	Salt Pt. Area	SON	38 .	12 .	1		10
285.4	N. Salt Pt.	SON			2		4
286.0	0.8km N. Salt Pt.	SON	3834.23	12320.26	2		0
286.5	N. Salt Pt.	SON			3		3
287.0	0.3km S. Chinese Gulch	SON	3835.21	12320.54	2		67
287.1	?km S. Chinese Gulch	SON	3835.	12320.			3
287.2		SON			2		1
288.0	.7kmN. Cannon Gulch-Fisk Mill	SON	3835.82	12321.47	2		10
289.0	0.7km S. Horseshoe Pt.	SON	3836.14	12321.94	2		10
290.0	0.7km N. Horseshoe Pt.	SON	3836.76	12322.02	2		34
291.0	0.7km N. Horseshoe Cove	SON	3836.95	12322.42	1	2	9
291.1	Horseshoe Cove Area	SON	38 .	12 .	2		1
292.0	0.5km S. Rocky Pt.	SON	3837.62	12323.15	3		1
293.0	Sandy Pt.	SON	3838.65	12323.98	3		18
294.0	0.7km S. Stewarts Pt.	SON	3838.98	12324.15	2		26
294.1	Stewarts Pt. Area	SON	38 .	12 .	2		5
295.0	0.2km S. Stewarts Pt.	SON	3839.19	12324.39	3		40
296.0	Stewarts Pt. Island	SON	3839.28	12324.50	3		79
296.1		SON			2		2
297.0	0.6km N. Stewarts Pt.	SON	3839.58	12324.54	2		4
297.1	Stewart's Pt. Area	SON	3839.	12324.	1		35
298.0	1.0km S. Black Pt.	SON	3840.48	12325.31	2		26
298.1	Black Pt. Area	SON	3840.56	12325.	3		48
298.2	?km S.E. Black Pt.	SON	3840.	12325.	1		4
299.0	0.4km N. Black Pt.	SON	3840.90	12326.33	2	1	36
299.1	Black Pt. Area	SON	38 .	12 .	2		29
300.0	2.8km N. Black Pt.	SON	3842.06	12327.08	2		1
300.1	N. Black Pt.	SON			2		1
301.0	3.8km N. Black Pt.	SON	3842.48	12327.16	2		1
301.1	?km N. Black Pt.	SON			2		23

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
302.0	5.2km N. Black Pt.	SON	3842.92	12327.63	2		125
303.0	6.0km N. Black Pt.	SON	3843.27	12328.21	2		17
304.0	6.2km N. Black Pt.	SON	3843.30	12328.27	2		39
305.0	6.7km N. Black Pt.	SON	3843.46	12328.64	2		53
306.0	7.1km N. Black Pt.	SON	3843.58	12328.92	2		1
307.0	7.3km N. Black Pt.	SON	3843.67	12329.00	2	1	164
308.0	7.4km N. Black Pt.	SON	3843.71	12329.02	2		74
309.0	7.7km N. Black Pt.	SON	3843.74	12329.09	1	3	45
310.0	1.3km S. Del Mar Pt.	SON	3844.25	12329.90	2		3
310.1	?km S. Del Mar Landing	SON	3844.	12330.	3		1
311.0	Del Mar Pt.	SON	3844.95	12330.75	1		18
312.0	1.3km N. Del Mar Pt.	SON	3845.12	12331.42	1	2	17
312.1	Del Mar Pt. Area	SON	38 .	12 .	1		27
313.0	Gualala Pt.	SON	3845.12	12331.60	1		54
313.1	N. Gualala Pt.	SON			2		9
314.0	Robinson Reef	MEN	3846.04	12332.74	2		4
315.0	Bourns Rock	MEN	3846.73	12333.37	2		48
315.1	?km N. Bourns Rk.	MEN	3836.	12333.	1		4
316.0	Fish Rocks	MEN	3847.86	12335.44	5	2	35
316.1	Onshore Near Fish Rocks	MEN	3848.	12335.			1
317.0	Havens Neck.3km N.Inside Cove	MEN	3848.62	12335.87	2		13
317.1	Vicinity Havens Neck	MEN	3849.	12336.	2		3
318.0	1.2km N. Havens Neck	MEN	3849.21	12336.19	2		19
318.1		MEN			2		25
319.0	0.6km S. Steen's Landing	MEN	3849.48	12336.69	2		5
319.1	?km N. Steens Landing	MEN	3849.	12336.	3		4
320.0	Morrison Gulch	MEN	3850.38	12337.99	3	2	69
321.0	Iverson's Landing (S. side)	MEN	3850.67	12338.51	2		15
322.0	Iverson's Landing (N. side)	MEN	3850.72	12338.66	2		0
323.0	Saunders Reef Area (inside)	MEN	3852.	12340.	2	1	28
324.0	0.8km N. Galloway Creek	MEN	3853.41	12339.79	2	1	53
324.1	1.2 Km S. Arena Cove	MEN	385	123	2		2
325.0	0.8km S. Arena Cove	MEN	3854.	12342.	1		27
325.1	?km. S. Pt. Arena	MEN	3855.10	12343.54	1	2	35
326.0	Pt. Arena	MEN	3855.36	12343.73	2	1	145
327.0	0.4km N. Mallo Pass Cr.	MEN	3902.21	12341.49	1		48
327.1	?km N. Mallo Pass Cr.	MEN	3902.	12341.	2		24
328.0	0.9km N. Mallo Pass Cr.	MEN	3902.52	12341.59	2	1	49
329.0	1.0km N. Mallo Pass Cr.	MEN	3902.91	12342.60	5	2	46
329.1	Bridgeport Landing	MEN			2		2
330.0	0.6km S. S. Elk Cr.	MEN	3905.78	12342.86	2		37
331.0	Elk Creek	MEN	3906.	12342.	2		1
332.0	Cuffey's Pt.	MEN	3908.70	12344.39	2		176
332.5		MEN	3909.60	12344.35	2		7
333.0	Devil's Basin	MEN	3910.16	12344.92	2	1	60
334.0	0.3km S. Saddle Pt.	MEN	3910.48	12345.03	2		73
335.0	0.2km S. Saddle Pt.	MEN	3910.53	12345.06	2		36
335.1	Vic. Arch of the Navarro	MEN	3911.	12346.	2		5
336.0	0.4km S. Salmon Pt.	MEN	3912.39	12346.33	2		19

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
336.1	Albion Head	MEN	3914.	12347.	2		10
336.2	?km N. Whitesboro Cove	MEN	3914.	12347.	3		1
337.0	1.8km N. Albion Head	MEN	3914.65	12347.02	2		37
337.1	?km N. Albion Head	MEN	3914.	12347.	2		2
338.0	0.2km N. Stillwell Pt.	MEN	3915.12	12347.22	2	3	52
338.1	Buckhorn Cove	MEN	3915.	12347.	2		1
339.0	Van Damme S. B.	MEN	3916.18	12347.66	2		38
339.1	Van Damme S.B.	MEN	3916.	12347.	2		17
340.0	0.7km N. Van Damme S.B.	MEN	3916.28	12348.01	3	2	18
340.05	N. Van Damme S.B.	MEN			2		1
340.1	Van Damme S.B. area	MEN	39 .	12 .	2		23
341.0	1.5km N. Van Damme S.B.	MEN	3917.27	12348.16	2		98
342.0	Near Goat Isl. Mendocino City	MEN	3918.34	12348.70	2		32
342.1	Goat Island Area	MEN	3918.	12348.	3		25
343.0	0.6km N. Goat Island	MEN	3918.67	12348.59	2		31
343.1	?km N. Goat IS.	MEN	3918.	12348.	2		20
344.0	1.2km N. Russian Gulch	MEN	3918.90	12349.12	2		22
345.0	Point Cabrillo	MEN	3921.02	12349.69	2		31
345.05	1.2km N. Russian Gulch	MEN	3921.65	12349.70	2		13
345.1	Casper Anchorage	MEN	3921.55	12349.76	2		24
346.0	Casper Anchorage Area	MEN	3921.	12349.	2		41
347.0	S. Mitchell Cr.	MEN	3923.	12349.			21
348.0	Soldier Pt. Area	MEN	3926.	12349.	2		33
349.0	.7kmN.SoldierPt.Ft.Bragg Area	MEN	3926.73	12349.42	2		51
349.1	?km N. Pudding Cr.	MEN	3927.16	12348.64	1		16
350.0	1.8km N. Pudding Cr.	MEN	3927.61	12348.56	2		27
351.0	0.8km S. Laguna Pt.	MEN	3929.	12348.	2		2
352.0	Laguna Pt.	MEN	3929.28	12348.55	1		183
352.1	N Laguna Point	MEN	3929.83	12347.94	2		29
352.2	?km N. Ten Mile River Bluff	MEN	3933.87	12346.35	2		24
353.0	0.3km N. Kibesillah Rock	MEN	3934.71	12346.93	2		55
354.0	Bruhel Pt.	MEN	3936.13	12347.45	5	1	46
355.0	Bell Pt.	MEN	3937.66	12347.27	2		9
355.1	?km N. Bell Pt.	MEN	3937.	12347.	2		4
356.0	Cape Vizcaino	MEN	3943.66	12349.81	2		67
356.1	Cape Vizcaino Area	MEN	3943.50	12349.	5		100
357.0	0.4km N. Cottoneva Cr.	MEN	3944.30	12349.88	2		14
358.0	Williams Pt.	MEN	3945.	12450.	1		25
359.0	0.3km N. Soldier Frank Pt.	MEN	3945.53	12450.43	2		14
359.1	?km N. Sea Lion Rk.	MEN	3945.	12450.	2		1
360.0	0.5km S. Anderson Gulch	MEN	3950.91	12453.45	5		58
361.0	0.3km S. Anderson Gulch	MEN	3951.01	12453.21	5		186
362.0	0.3km N. Anderson Gulch	MEN	3951.16	12453.44	5		78
363.0	Northpoint Cove	MEN	3951.06	12453.85	5		839
364.0	0.6km N. Mistake Pt.	MEN	3951.85	12454.41	5		13
365.0	Jackass Creek Area	MEN	3951.	12454.	5		52
366.0	Seal Rock 1.5km S.Bear Harbor	MEN	3954.08	12455.61	2		240
366.1	Seal Rock Area	MEN	3951.87	12453.84	5		142
367.0	Pt. No Pass	MEN	3958.	12459.	2		10

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
367.1	Pt. Delgada	MEN	4000.98	12404.52	2		21
368.0	1.4km N. Pt. Delgada	H	4001.76	12404.82	2		43
368.1	?km. S.E. Miller Flat	H	40	124	2		33
369.0	5.0km N. Big Flat Creek	H	4009.	12412.	2	3	13
369.1	Reynolds Rk.	H	40	124	2		1
370.0	Sea Lion Gulch	H	4014.	12420.	2		3
371.0	1.7km S. Punta Gorda	H	4014.11	12420.46	2		25
372.0	1.3km S. Punta Gorda	H	4014.	12421.	2	1	3
373.0	Hair Seal Rock	H	4019.45	12421.39	2		172
373.1	?km N. HAIR SEAL ROCK	H	4020.	12421.	2		34
374.0	1.6km N. Hair Seal Rock	H	4019.89	12421.39	2		28
375.0	2.2km N. Hair Seal Rock	H	4020.	12421.	1	2	10
376.0	2.7km N. Hair Seal Rock	H	4020.18	12421.74	1		4
377.0	1.7km S. Sugarloaf Rock	H	4025.	12424.	2		4
378.0	0.4km S. Sugarloaf Rock	H	4026.12	12424.56	2		5
378.1	?km S. Sugarloaf Rock	H	4026.	12424.	1		2
379.0	0.2km S. Sugarloaf Rock	H	4026.24	12424.66	2		3
380.0	0.3km S. Sugarloaf Rock	H	4026.48	12424.69	2		15
380.1	Vicinity Cape Mendocino	H	4026.	12424.	2		4
380.2	N. Cape Mendocino	H	4026.82	12424.98	2		2
381.0	False Cape	H	4030.60	12423.17	2	1	46
381.1	Cockrobin Island	H	4030.	12418.	4		441
381.2	?km S. Cockrobin Island	H	40 .	124 .	4		81
381.3	?km. N. False Cape	H	4030.	12423.	2		15
382.0	Eel River Spit	H	4038.61	12418.99	4		483
383.0	S. Humboldt Bay	H	40 .	124 .	4		492
384.0	Daby Island	H	4048.68	12408.97	4		518
385.0	N. Humboldt Bay	H	4050.30	12406.5o	4		170
386.0	Luffenholtz Cove	H	4102.44	12407.20	2		9
386.1	Vicinity Tepona Pt.	H	4102.	12407.	2		1
387.0	Cap Rock	H	4102.65	12407.51	2		17
388.0	Tower Rock	H	4103.10	12407.80	1		39
389.0	Seal Rock Shoals	H	4103.04	12407.96	2		31
390.0	Jamieson Cove	H	4103.25	12408.14	2		79
390.1	Vicinity Trinidad Head	H	4103.	12408.	2		14
391.0	Dome Rock	H	4103.39	12408.43	2		43
392.0	Lighthouse Shoals	H	4103.40	12408.63	2		19
393.0	Marine Lab Shoals	H	4103.52	12409.45	2		93
394.0	Flatiron Shoals	H	4103.60	12409.61	2		22
395.0	Myer's Cove	H	4104.29	12409.46	2		32
395.1		H			2		1
396.0	Bench Cove	H	4105.36	12409.32	1	2	23
396.1	Vicinity Bench Cove	H	4105.	12409.	1		16
397.0	Seal Rock	H	4105.90	12409.56	2		12
398.0	Seagull Rock	H	4107.45	12409.72	2		43
398.1		H			2		6
399.0	Midway Rock	H	4107.48	12409.72	2		69
400.0	Close Rock	H	4107.51	12409.56	1		67
401.0	Flat Top Rock	H	4107.52	12409.84	2		24

SITE	LOCATION	COUNTY	LAT	LONG	SUBST	SUBS2	MAX
402.0	Little Gibralter	H	4107.58	12409.72	2		15
403.0	Spearhead	H	4107.63	12409.88	1		27
404.0	Palmers Pt.	H	4107.75	12409.84	1	2	79
405.0	Cannonball Beach	H	4107.88	12409.80	1	2	30
405.1		H			2		1
406.0	Sharp Pt.	H	4114.18	12406.48	3		55
407.0	Redwood Creek Spits	H	4117.55	12405.34	4		9
407.1	Mussel Pt.	H	4118.78	12405.85	2		13
408.0	Major Creek	H	4119.74	12405.01	2		10
409.0	Klamath R. Spits	DN	4132.71	12404.75	4		341
410.0	N. Klamath Rock	DN	4133.16	12405.41	2		48
411.0	Saddle Rocks	DN	4133.68	12405.76	2		20
412.0	Klamath Cove	DN	4133.98	12405.86	2		56
413.0	Two Rocks	DN	4134.35	12406.09	2	3	96
413.1	Midway Point	DN	4140.	1240	2		1
414.0	Scat Beach	DN	4140.23	12408.22	5		516
415.0	Millers Point	DN	4140.35	12408.45	1		100
416.0	Mates Point	DN	4140.97	12408.41	3		61
417.0	Battery Point	DN	4144.81	12412.34	1		3
418.0	Castle Rock	DN	4145.68	12414.55	2		542
419.0	Pt. St. George	DN	4146.00	12415.53	2		3
420.0	Mouth of Smith River	DN	4156.37	12411.82	4	3	23
421.0	NW Seal Rock	DN	41 .	124 .	2		9
422.0	Farallon Islands	FIs	3742.	123 .	2		84